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HOUSE OF LORDS

SESSION 1994-95
3rd REPORT

SELECT COMMITTEE ON SCIENCE AND TECHNOLOGY

MEDICAL RESEARCH AND THE NHS REFORMS

REPORT

Ordered to be printed 10th May 1995

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REFERENCES IN THE TEXT ARE AS FOLLOWS:

(Q) refers to a Question in oral evidence
(p) refers to a page in HL Paper 12-I (up to p106) or 12-II (p107 onwards) of this Session

THIRD REPORT

10 May 1995

By the Select Committee appointed to consider Science and Technology.

ORDERED TO REPORT

MEDICAL RESEARCH AND THE NHS REFORMS

Acronyms are listed in Appendix 15

CHAPTER 1 INTRODUCTION

1.1 In this Report, the Select Committee has set out to do three things. First, we review the NHS Research and Development (R&D) Strategy, for whose genesis this Committee's report on Priorities in Medical Research in 1988 was in part responsible. It is a great sadness to us that Lord Nelson of Stafford, who chaired the enquiry in 1988 and played an active part in the early stages of this follow-up exercise, died in January 1995. Secondly, we assess the Culyer report, "Supporting Research and Development in the NHS", and the steps taken so far to implement its recommendations, which address provision for research in the National Health Service (NHS) internal market. Thirdly, we present evidence of further issues affecting medical research in the UK which neither the R&D Strategy nor the Culyer report addresses directly: changes affecting careers in clinical research; the shift of health care away from hospital, affecting the flow and concentration of NHS patients, and the consequent rationalisation of hospitals in big cities; and certain aspects of intellectual property.

1.2 There are two important matters affecting clinical research which this report does not cover: ethics and indemnity. Nor do we pass judgement on the NHS internal market as such; for better, for worse, we take it as given. With the Health Authorities Act being passed as we write, with details beginning to emerge of how the Culyer report is to be implemented, and with Professor Michael Peckham coming to the end of his term as the first NHS Director of R&D, we hope that the House will consider this report to be timely.

The report of 1988

1.3 In March 1988 this Committee reported on Priorities in Medical Research, with particular reference to the needs of the NHS. The Committee found UK medical research in a condition of despondency and low morale. Inadequate funding left many good research proposals unsupported; career prospects for clinical researchers were poor, particularly by comparison with medical staff engaged solely in clinical practice; clinical research was under pressure from the demands of clinical service; and above all, the NHS was run with little awareness of the needs of research or what it had to offer.

1.4 The Committee's central recommendations addressed this last point. They proposed the creation of a National Health Research Authority (NHRA) within the NHS (and equivalent bodies for Scotland, Wales and Northern Ireland). The NHRA would take over the Department of Health and Social Services (DHSS) [now DH] budget for health services research, and would receive additional funds by "mandatory contribution" from regional health authorities (RHAs). It would use these funds to support "an applied science base which matches the service needs of the NHS". It would fund clinical research by reference to service needs, complementing the role of the Medical Research Council (MRC) which would continue to fund clinical research in response to advances in science. The NHRA would also build up, from what was then a low level, a national capability in public health research and NHS operational research.

1.5 Other functions proposed for the NHRA were: to represent the interests of research and researchers in discussions of NHS policy and practice; to be the point of contact between the NHS and the other bodies with an interest in clinical research; to promote evaluation of clinical practice and health technology assessment; to promote dissemination and implementation of research results within the NHS; and to co-ordinate the work of the Regional Research Committees which ran the Locally Organised Research Schemes (LORS). In all its activities, the NHRA was to give due weight to research in primary care and general practice, and the research needs of dentistry, nursing and the professions allied to medicine.

1.6 The Committee also recommended:

— a "national forum", where the NHRA would meet the research councils, the charities and the pharmaceutical industry to discuss research priorities;

— that the Service Increment for Teaching (SIFT), by which the NHS gave extra support to teaching hospitals according to the number of undergraduate medical students, should be expanded to acknowledge research as well as teaching (becoming "SIFTR"), and should be allocated "on the basis of national academic priority" by a system "perhaps including an element of selectivity";

— that LORS should be strengthened by giving each RHA a ring-fenced research budget, a secretariat to administer it, and a duty to report annually on the use of it;

— extra public funding of £75m over three years to re-equip clinical research facilities throughout the country.

1.7 In some significant respects the Committee recommended no change. The existing plurality of sources of funds for medical research should be preserved, since "The aggregate of decisions taken by different interests is more likely to reflect the balance of needs and opportunities in research than a centrally directed research effort, provided that the different interests are aware of each other's priorities". "The tradition of investigator-initiated medical research" - strongly represented by the MRC - "should be preserved". So should the principle of mutual uncosted support or "knock-for-knock" governing the relationship between a teaching hospital and its associated university medical school, since "it will never be practical for medical schools funded by the UGC [now the Higher Education Funding Councils (HEFCs)] and teaching hospitals funded by the NHS to account to each other for every moment of staff time", though the NHRA should advise on situations where academic resources were being diverted into service as a result of underfunding.

The Government's response

1.8 The Government's eventual response to the report (Cm 902, December 1989) was extremely positive. The Government agreed to appoint a Chief of Research and Development for the Department of Health (DH) and the NHS, to perform the tasks proposed by the Committee for the NHRA, as well as those of the former part-time Chief Scientist. They agreed to re-launch SIFT as SIFTR (Service Increment for Training and Research), "a clearly earmarked payment ... distributed ... on the basis of both research and teaching activity" (and to provide similar support for research in non-teaching hospitals - a significant gap in the pre-1988 arrangements). They rejected the proposals for an NHRA and a "national forum" as unnecessary, and the demand for a special allocation of funds as incompatible with the workings of the Science Budget.

The NHS R&D Strategy

1.9 Professor Michael Peckham started work as Department of Health Director of Research and Development (DRD) in January 1991. (The change of title reflected the Government's decision, subsequent to their response, to make him a full member of the NHS Management Executive (NHSME).) In April 1991 he announced a new NHS R&D Strategy, and in September 1991 he published *Research for Health*; a second edition was published in 1993. The NHS R&D Strategy is intended to ensure that the content and delivery of care in the NHS are based on high-quality research, and to produce a "knowledge-based service" with a "culture of evaluation"; it is the first such strategy in the world.

1.10 In 1989-90, the Department of Health already spent 0.9 per cent of the NHS budget (£225m) in ways which now form part of the R&D Strategy (see Appendix 4, paragraphs 7-10 and Table 2). In 1992-93, the amount rose above £300m, but the percentage remained around 1 per cent. For 1994-95, the Department planned R&D expenditure of £437m, or 1.2 per cent. *Research for Health* 1991 set a target of 1.5 per cent by 1995-96; *Research for Health* 1993 reported the setting up of an R&D Finance Information Group, to advise on identification of R&D expenditure and improved financial management, as a "basis" for the increase to 1.5 per cent.

1.11 A Central Research and Development Committee (CRDC) was established in October 1991 to advise on priorities for centrally-funded and regional R&D. It was chaired by Professor Peckham; its members included NHS managers and academic researchers. The Committee liaised with the regions and Special Health Authorities (SHAs), the Department of Health, the Welsh, Scottish and Northern Ireland Offices, the HEFCs, the universities, the research councils, the charities, industry and professional bodies; and it had regard to the overall Department of Health strategy first set out in the White Paper "Health of the Nation" (Cm 1986, July 1992). It established six perspectives from which to assess priorities for R&D: diseases; management and organisation; client groups; consumers; health technologies; and research methodology.

1.12 The CRDC adopted a "problem-led" approach, as opposed to the "investigator -led" or "science-driven" approach associated with the research councils. Having identified a priority area, it appointed a time-limited multidisciplinary advisory group, to identify and prioritise particular problems suitable for commissioned research. Once a group reported to the CRDC, a lead region was identified to oversee the commissioning of centrally-funded research, whether from within that region or elsewhere (p368). In some cases, aspects of the group's recommendations were also taken forward by the MRC. The progress of the groups set up so far is shown in Box 1. Besides these time-limited advisory groups on particular issues, the CRDC set up a Standing Group on Health Technology (SGHT): see Box 2.

1.13 *Research for Health* gave a major role to the Regional Health Authorities. The regions appointed Regional Directors of Research and Development (RDRDs - mostly university clinical medical professors) and R&D Managers, and set up small Regional R&D Offices and Regional R&D Committees. Some Regions have appointed Associate RDRDs, to complement the expertise of the Director, or to take territorial responsibility for part of the Region. The RDRDs were expected to develop their own R&D programmes, on their own resources, in collaboration with the local universities, and to contract with the central R&D Division to manage the centrally-funded programmes chosen by the CRDC. In 1991-92, the regions were asked to identify their R&D spending; in September 1992 they produced their first annual R&D plans, covering centrally- and regionally-funded research, responsive research funding (formerly the Locally Organised Research Schemes), development and dissemination, and service support. The most recent plans are summarised in Appendix 8.

1.14 We met four of the original RDRDs in March 1994. One of them, Sir Miles Irving, told us (Q1267) that the role of the RDRD in the beginning of the Strategy was challenging and stimulating; it involved "changing hearts and minds" by persuading the biomedical research community to begin to think in terms of HSR and the value of research to the NHS. Another, Professor George Alberti, confirmed (Q1268) that the early years were exciting; he emphasised the RDRD's role as a networker, across institutional and disciplinary boundaries.

BOX 1: CRDC ADVISORY GROUPS

Disease-related perspective

Mental health and learning disabilities - Advisory Group reported April 1992. Commissioned programme of centrally-funded R&D managed by Northern & Yorkshire RHA. First projects completed 1994. Other priorities commissioned by MRC and other RHAs.

Cardiovascular disease and stroke - Advisory Group reported April 1993. Commissioned programme managed by Northern & Yorkshire RHA. First projects completed 1995. Other priorities taken forward by MRC and other RHAs.

Cancer - Advisory Group reported July 1994. Commissioned programme being managed by South and West RHA. Other priorities being taken forward by MRC and other cancer research organisations.

Asthma management - Advisory Group to report early 1995.

Dentistry - Regionally-led Advisory Group reported October 1994.

Diabetes - Report on R&D priorities to be considered by CRDC in late 1994.

Nutrition - Report on R&D priorities to be considered by CRDC early 1995.

Management and organisation perspective

Interface between Primary and Secondary care - Advisory Group reported October 1993. Commissioning being undertaken by North Thames RHA. Other priorities being taken forward by MRC.

Implementation - Advisory Group due to report in early 1995. Led by North Thames RHA.

Client Groups perspective

Physical and complex disabilities - Advisory Group reported July 1993. Commissioning now being undertaken by South and West RHA. Other priorities being taken forward by MRC.

Mother and child health - Advisory Group due to report December 1994. Commissioning to be undertaken centrally by R&D Directorate led by RDRD of South Thames RHA.

Source: Nuffield Provincial Hospitals Trust Review.

1.15 The NHS R&D Strategy also embraces an Information Systems Strategy, whose elements are as follows:

(i) *Project Registers System* The central and Regional R&D Directorates have set up a network of registers of research projects which they fund, manage, support or otherwise have an interest in, with guidance from a central Co-ordinating Unit. By working with other funders, it is intended eventually to produce a national database of medical research projects. See p354.

BOX 2: STANDING GROUP ON HEALTH TECHNOLOGY

By "health technology" (or "intervention"), the NHS means any procedure used by practitioners to promote health, prevent or treat disease, or improve rehabilitation or long-term care. "Health technology assessment" involves examining a technology, whether new or familiar, in terms of outcomes, costs, and broader impact. The importance of this form of applied research to those responsible for delivering health services from limited resources was identified by two recent reports: *Assessing the Effect of Health Technologies* (DH, 1992) and *Medical Research and Health* (ACOST, 1993 - see Appendix 14). Health technology assessment is now intended to form a major part of the NHS R&D programme.

The Standing Group on Health Technology has been set up to identify and prioritise technologies in need of assessment; to identify technologies which should not be used pending assessment; to identify new technologies likely to prove beneficial on assessment; and to advise on research into the methods of assessment themselves. The chairman is Sir Miles Irving, Professor of Surgery at Manchester. The members include five more medical professors, two representatives of purchasers and one of providers, two economists and a sociologist, one person from the pharmaceutical industry (Dr Peter Doyle, of Zeneca, chairman of the ACOST enquiry mentioned above), the Deputy Chief Medical Officer, and the Director of the York Centre for Reviews and Dissemination. The Scottish, Welsh and Northern Ireland Offices and the MRC send observers.

For its first report in December 1993, the Group set up six Panels: one each on primary/community and secondary/tertiary care; three on the intermediate issues of pharmaceuticals, population screening and diagnostics and imaging; and one on methodology. Following wide consultation, producing 1400 proposals, each Panel identified 20-25 priorities for assessment; the Group collated these into a list of 26 (excluding methodology), on which the NHS and MRC are now commissioning research. The Group produced a second report in December 1994. The Group will review its list each year, and aims in the long term to produce an inventory of assessed technologies.

The Group may also convene special groups to advise on the implications for the NHS of rapid advances in science. A group on genetics has reported; one on biomaterials and implants is still at work.

The Group's work is being emulated in other countries; officials from the Department of Health are leading a European working group on health technology assessment.

Sir Miles described his Group's work to us in February (Q1267). He said, "The Department of Health have supported our activities, so that when we make a judgement that a technology needs assessment, then through the medium of an Executive letter that technology's use is controlled until the results become available". One technique currently controlled on this basis is laparoscopic resection of colon cancer.

(ii) *Cochrane Centre* The Cochrane Centre (Director, Dr Iain Chalmers) was opened in Oxford in 1992. It supports the preparation of systematic reviews of randomised controlled trials (see Appendix 3) of health technologies. The first set of reviews, of pregnancy and childbirth, was released in 1993. Several other countries (USA, Canada, Australia, Denmark, Italy, Germany) have opened similar centres, to form the "Cochrane Collaboration". Archie Cochrane was an epidemiologist working in Wales in the 1970s, a powerful supporter of randomised controlled trials and author of "Effectiveness and Efficiency", an influential monograph. See Q448.

(iii) *York Centre for Reviews and Dissemination* Complementing the work of the Cochrane Centre, this Centre at the University of York (Director, Trevor Sheldon) commissions reviews of available research, and transfers R&D information to practitioners and managers by means including the Effective Health Care Bulletin series. It is intended to develop a service to answer enquiries about R&D. The York Centre is a leading member of the International Network for Agencies for Health Technology Assessment. See Q431.

1.16 Dissemination, or getting the results of research into practice, is a major theme of the NHS R&D Strategy, and every RHA has a range of activities in this area. Approaches include the original Getting Research into Practice and Purchasing (GRiPP), pioneered in Oxford and widely imitated (see p384); contract protocols and evidence-based clinical guidelines; evidence-based clinical audit; seminars and bulletins. North West, Trent, North Thames and South and West offer funds to support evaluation of innovations in service. Besides the CRDC's national programme of research into the methodology of implementation, West Midlands and South and West are also funding research in this area.

1.17 The Centre for Evidence-Based Medicine has just opened, in the Nuffield Department of Medicine in Oxford. It will work "downstream" of the York and Cochrane Centres, to promote medical education (including continuing education) based on the findings of research. See Q460 and pp353 and 384.

1.18 The NHS R&D strategy also aims to develop the human resources of the health services research base; and to foster among practitioners and managers a culture receptive to research findings. The NHS is liaising with the MRC, the Economic and Social Research Council (ESRC), the universities, charities and professional organisations concerning research training and careers. Under the umbrella of the R&D Strategy, a "research capacity strategy" for NHS R&D is to be launched shortly (pp357, 369), covering career researchers, research managers and supervisors, and critical appraisal skills for practitioners and managers. According to Professor Culyer (Q503), the emphasis of the research capacity strategy is on the "Cinderella" disciplines of general practice, the nursing professions, and the professions allied to medicine: see Appendix 10.

1.19 Every RHA devotes some resources to education and training, in both the conduct of research and the assessment of research findings ("critical appraisal"). In November 1994 (Q38), the RHAs between them were offering 123 postdoctoral fellowships (medicine and dentistry 49, nursing and professions allied to medicine 74) and 36 research training studentships (medicine and dentistry 21, nursing and professions allied to medicine 15). Medical fellowships in health services research are being developed, funded jointly by RHAs and the MRC. Most RHAs provide workshops or short courses on research methods and critical appraisal. Several RHAs are fostering research in primary care: West Midlands funds a GP Facilitator to encourage research into general practice by General Practitioners (GPs); Trent is commissioning a Focus for Promotion of Health Services Research in Primary Care; North Thames offers GP Research Fellowships, while South and West funds up to ten R&D General Practices per year. Other initiatives include the Technical Support Network for R&D and audit in North West Region, and South and West's R&D Support Units, providing analytical skills and other back-up to researchers; North Thames's Curriculum Development Officer, to raise the profile of research and critical appraisal in professional education; South Thames's statistical service; and, in several Regions, semi-formal R&D networks.

1.20 The NHS R&D Strategy includes elements of the DH centrally-commissioned research programme, for which Professor Peckham is also responsible, advised by an internal Departmental Research Committee (p9). The programme funds strategic initiatives (see Box 3) and peer-reviewed projects in universities or the 13 DH research units (see Appendix 9). The programme has seven themes: population health status; lifestyle and health; health promotion; food and environment; social services - adults and children; effectiveness of health technologies; and health service organisation. The programme both informs and is informed by departmental priorities such as the Health of the Nation targets, "care in the community", and the Patient's Charter. It incorporates the Radiation Protection Research Programme of the former Department of Energy. 5 per cent of the programme addresses priorities set by the Welsh Office.

BOX 3: DH CENTRALLY-COMMISSIONED RESEARCH PROGRAMME - STRATEGIC INITIATIVES

Strategic health service functions

Primary health care services in London
Skill mix
Policy on mental health services
Community health services
Information technology
Effectiveness of purchasing models
Prescribing

Public and environmental health

Variations in health status
Nutrition
Environment: air pollution, skin cancer
Individual unhealthy behaviour
Vaccines

Personal social services

Social services for adults and children

1.21 *Research for Health* 1993 and the *Forward Look* 1994 reported the following developments in respect of co-ordination between funders, performers and users of research:

(i) A new Concordat between the health departments and the MRC came into effect in January 1992. This covers the voice of the departments in setting MRC priorities and *vice versa*, and NHS support for MRC clinical research.

(ii) The Department of Health formed a strategic alliance with the ESRC in 1993, covering priority-setting, joint funding and research training. The health departments signed a Concordat with the Engineering and Physical Sciences Research Council (EPSRC) on 30 January 1995 (DH Press Release 95/45), and expect to sign another with the Biotechnology and Biological Sciences Research Council (BBSRC) later this year.

(iii) The Cardiovascular and Stroke Research Liaison Committee (British Heart Foundation, Wellcome Trust, MRC, Stroke Association, Department of Health, Scottish Office) was convened in 1991. Two new Research Liaison Committees have since been formed: Respiratory, and Biomedical Technologies. The UK Co-ordinating Committee for Cancer Research predates the Strategy. These Committees seek to avert gaps or duplication in research programmes, and facilitate joint planning and collaboration.

(iv) The NHS-Industry Research Advisory Group was established in 1993 (on advice from the Biomedical Technologies RLC), to advise on issues such as LINK, intellectual property rights (IPR) and technology transfer, relations with the NHS Supplies Authority, and access to the NHS for industrial R&D.

(v) Collaboration with other Government departments is developing; in particular with the Ministry of Agriculture, Fisheries and Food (MAFF) over nutrition, the Department of the Environment (DoE) over housing for the elderly, the Department of Trade and Industry (DTI) over LINK (including MEDLINK - see Appendix 14) and EUREKA, and the Health and Safety Executive (HSE) over radiation.

(vi) European Union (EU) and international liaison are developing.

1.22 Professor Peckham has asked Professor Stephen Holgate, an MRC Clinical Research Professor in Southampton, to act as "NHS Director of Trials". We met Professor Holgate in March (QQ1271-4, see also p367), and he told us what he expects to do in this role. He envisages enlisting the Association of the British Pharmaceutical Industry (ABPI), the MRC, the Association of Medical Research Charities (AMRC) and the National Association of Health Authorities and Trusts (NAHAT), first to collect evidence of the scale and nature of current difficulties, and then to produce a strategy for clinical trials. This might involve establishing a register of consultants in specialist centres willing to take part in trials, provision of training in trial procedures "of which there is very little at the moment in the UK" (see Appendix 14), provisions concerning ethics and indemnity, and the creation of a "focus of expertise". The MRC welcomes Professor Holgate's appointment, anticipating that it "should assist with prioritising English needs for trials and facilitating provision of service support requirements" (p455).

1.23 After implementation, the final and essential stage of the R&D Strategy is evaluation. According to PA Consulting, who recently reviewed the Strategy for the Nuffield Provincial Hospitals Trust, the CRDC is working on cost-benefit analysis of aspects of the Strategy; but "Our review suggests that work on cost-benefit is still not robust enough to support routine cost-benefit audit".

1.24 This is only an overview of a complex and evolving initiative. Sources of further information are noted in Box 4. Similar strategies, at various stages of development, are being developed in Scotland, Wales and Northern Ireland; see Appendices 11-13.

BOX 4: FURTHER READING ON THE NHS R&D STRATEGY

Priorities in Medical Research, HL Paper 54, Session 1987-88
Government response, Cm 902, December 1989
Priorities in Medical Research Supplementary Report (consisting of exchanges with the Secretary of State for Health), HL Paper 51, Session 1989-90
Research for Health 1991, 1993
Evidence of Professor Peckham to this Committee's enquiry into Priorities for the Science Base, June 1993, HL Paper 82-I
Nuffield Provincial Hospitals Trust, Review of the Activities of the R&D Directorate, PA Consulting Group November 1994
"R&D: Towards an evidence-based health service", Department of Health February 1995
Forward Look of Government-funded R&D 1995
"Effective Health Care" series, York Centre

Medical research and the NHS reforms

1.25 "The importance of the NHS as a test-bed for medical research is vital. By virtue of its national coverage, the NHS is able to provide a broad, well-documented database of patient information and a wide range of patients...This is unobtainable in most other countries, where information is held by a large number of individual doctors with no incentive to collaborate" (p457).

1.26 This is the view of the Government's Office of Science and Technology (OST). Yet, even as the pace of medical science quickened (eg current advances in molecular biology, non-invasive diagnostics and minimal-access surgery), and as the NHS R&D Strategy began to take shape, concerns began to be expressed that the NHS reforms, initiated by the Health Departments and the National Health Service and Community Care Act 1990, were threatening to break up this vital test-bed. These concerns, which echo through our evidence, are well set out in the following passage from the Culyer report:

"Before the Task Force was established there was a good deal of anecdotal evidence to suggest that the NHS reforms might pose a threat to R&D, but little hard evidence. This was one area where almost every respondent [to the Task Force] had serious concerns.

Many expressed the view that particular policies were causing difficulties for R&D now or would do so in the future. They cited the impact of many changes:

- the creation of the internal market for patient care, with the purchaser/provider split and the development of contracting;
- General Practice fundholding;
- initiatives to reduce waiting times;
- efficiency indices;
- capital charges;
- the shift from secondary to primary care;
- proposals to reduce junior doctor hours;
- the reorganisation of London's health services;
- the Calman proposals on shortening the time for training [specialist] doctors; and
- the limits on professional indemnity.

It was recognised that many of these policies were designed to encourage competition between health care providers and to increase the efficiency and cost-effectiveness of health service provision. Commentators suggested that while the reforms had the potential to improve patient care in this way, the same factors worked to the detriment of R&D. Cost pressures forced purchasers and providers of health care to take a short term view. Both were under pressure to spend only on patient care. Capitation losers in particular [ie those facing declining resources under the operation of "weighted capitation", which allocates NHS funds in proportion to number and needs of populations] were said already to be squeezing out R&D. Contracts emphasised numbers treated, not the needs of R&D. Patients were therefore spending a shorter time in hospital beds which allowed less time to work with them. Doctors were under increasing pressure to deliver more patient care and had less time and energy for R&D. In general there was a feeling of insecurity and lack of continuity which made the long term planning perspective central to recruitment and training for R&D difficult.

Short term cost pressures were also driving out R&D-related investment in a number of ways. The clinical science base was being eroded. Purchasers and providers of health care were said to be less inclined to invest in direct costs of R&D unless it was aimed at meeting a short term need. And even then, investment in R&D undertaken under this kind of pressure had its own risks. Research took time to formulate properly and if rushed, might not address the right question. Scientific quality, relevance to the NHS, and generalisability of the research would all be at risk.

NHS purchasers were also reluctant to pay the ordinary service costs of procedures being evaluated, or to pay the costs of tertiary and other distant referrals upon which much R&D - particularly that into less common conditions - depends. Consequently, it was suggested that some major clinical trials were at risk of failing, or not starting. Increasing reliance was being placed on Special Trustees and industrial sponsors to fund the continuation of programmes, but this was not a satisfactory long term solution. Such short-termism risked alienating the research community to the ultimate loss of all parties.

> Competition within the patient care market was also seen as inimical to R&D. Health care purchasers and providers would be unwilling to invest in R&D because they did not own the results. There was said to be evidence of unwillingness to share data and results of R&D, and to co-ordinate information systems, which led to a greater risk of wasteful duplication of work. Purchasers were tending to support local service providers rather than send patients to major research centres. The independent evaluation of treatments and services was at risk." (Culyer report paragraphs 2.6-12)

1.27 On 15 October 1993 these concerns were crystallised in a widely-publicised letter written by the President of the Royal Society, Sir Michael Atiyah, to the Prime Minister: see Box 5.

BOX 5: LETTER FROM THE PRESIDENT OF THE ROYAL SOCIETY TO THE PRIME MINISTER

"I am writing to express the serious concern felt by my scientific colleagues about prospective developments in the Health Service and their potential impact on medical research and education. I hope that these concerns, which are very widely shared, will be addressed before it is too late.

The long-standing excellence of medical education and research in the UK has been fostered by the close co-operation between Regional Health Authorities and their regional medical schools.

If the Regional Health Authorities are reorganised or dissolved, then it is essential that the education and research which they currently support should be financed through other channels. A further devolution of funds to individual purchasers, without adequate provision for the continued support of medical teaching and research, would lead to a serious crisis and a great loss of performance and reputation for British science."

The Culyer report

1.28 On 23 November 1993, the Department of Health announced the setting up of an NHS Research Task Force, with the following terms of reference:

> "Taking into account the NHS reforms and the functions and manpower review [which produced the plans for unitary Health Authorities and "single-centre working" now embodied in the Health Authorities Act 1995], and building on existing work, the Task Force is asked to:
>
> (i) take stock of the current situation with regard to the conduct and support of R&D in the NHS, to establish the nature and extent of any problems, and in that light to consider whether it is appropriate to make recommendations; and if it is;
>
> (ii) review the ways in which the NHS currently funds its own R&D and supports that funded by others;
>
> (iii) review the ways in which the NHS mechanisms for funding and supporting R&D promote and/or hinder the aims of the NHS R&D Strategy and other Government policies relating to R&D in the NHS;
>
> (iv) advise on alternative funding and support mechanisms for R&D, including any necessary transitional measures, recognising that any new system will have to operate within available resources."

1.29 The chairman of the Task Force was Professor Anthony Culyer, Pro-Vice Chancellor and Professor of Economics at the University of York and an authority on the economics of health services. The nine other members were all clinical academics or NHS managers or both; several of them already had leading roles in connection with the NHS R&D Strategy. Sub-Committee I met all but two of them while preparing this report. The Task Force consulted widely - they wrote over 900 letters, and received over 200 replies. They met their demanding deadline of 30 April 1994, but the Department of Health did not publish their report, "Supporting Research and Development in the NHS" (ISBN 011 321831 1, HMSO), until 14 September 1994.

1.30 The Culyer report's principal recommendations are as follows (references are to paragraphs of the report). First, all that the NHS spends on R&D and its service costs should be brought together into "a single explicit funding stream" (3.28 - see Box 6). "This funding stream should be conceived as a levy on all health care purchasers' allocations and determined annually" (3.30). Out of the stream should flow funding in three categories (3.46): the costs of research supported by the NHS (and supporting functions including the Information Strategy and development of research capability); the excess service costs of non-commercial research conducted in NHS settings, whether supported by the NHS or by another funder; and the costs of maintaining research facilities, so far as they are not attributable to a particular piece of research. Funds in the first two categories should be awarded in response to bids "from researchers, research institutions or host NHS providers, from any discipline or NHS setting" (3.49, 3.50). Research facilities funding should be "available only to NHS institutions with substantial R&D programmes" (3.54), and awarded on the basis of "formalised assessment by research ratings" (3.57). Professor Peckham sees facilities funding as "a second dual support system" (Q1284).

BOX 6: THE SINGLE FUNDING STREAM

Pre-Culyer (see Appendix 4)	*Post-Culyer (from 1996)*
CRDC programme	Projects and programmes
DH centrally-commissioned programme	Service support
Other DH research	Research facilities
25 per cent of SIFTR	Information systems
Non-SIFTR	Research capacity
SHAs subvention	
RHA R&D budgets	
"Implicit research" (Local purchasers and providers)	

1.31 With regard to the machinery for decision-making, the Task Force's proposals build on existing structures. The Director of R&D, and the Regional Directors, should remain the principal decision-makers, assisted by an expanded Central R&D Committee (3.13) and new regional consultative bodies (3.24) and R&D commissioning units (3.77). Other funders of research should be involved by means of a new "national forum" (3.6), and a series of "clear understandings" concerning the provision of NHS service support (3.19). The MRC Concordat should be reviewed, to put the MRC on a similar footing to other research funders (3.18).

Implementing the Culyer report

1.32 Announcing the publication of the Culyer report (DH Press Release 94/406), the Secretary of State for Health welcomed its "broad thrust that:

— we marshal the funds for R&D and for service support for R&D coherently and separately from funds for other activity;

— those who perform R&D should justify their claims on resources, do so in competition with others, and be accountable for the work they do;

> — the primary and community sectors should be on an equal footing with the acute sector in terms of access to funding both for R&D and associated service costs...
>
> Today I can give a commitment that for next year more funding will be ring-fenced to protect teaching hospitals' research costs. I am prepared to look sympathetically at ring-fencing more money in subsequent financial years to help build up the new funding stream for research."

1.33 The Secretary of State made further announcements on 15 December 1994 (DH Press Release 94/589; Q1279). The single stream of NHS R&D funding recommended by the Task Force would operate from 1996-97, but with no significant changes in distribution of funding until 1997-98. The recommended National Forum would be established, with Professor Peckham in the chair; the membership of the CRDC would be broadened, and it would have a new role in advising on the shape of the R&D budget: see Boxes 7 and 8. The Secretary of State also announced an extra £8m for commissioned R&D for 1995-96. The reconstituted CRDC met for the first time on 16 March, and the Forum on 25 May.

1.34 By the time we met Mr Colin Reeves, NHS Director of Finance and Corporate Information (and a former member of the Task Force), in February, plans were further advanced (Q550). The Research and Development Directorate (RDD) had set up four implementation groups: an overall project team; a group to determine the criteria for service support; a group working on facilities funding; and a working group on methods and criteria for costing direct, indirect, service support and facilities costs of R&D and on methods of contracting and accounting for R&D support. The timetable for implementation was to be as follows:

1995-96	Single funding stream identified
1996-97	Single funding stream becomes NHS R&D Budget held by DRD Levy in operation Research assessments undertaken for purposes of facilities funding Costing and accounting manual issued
1997-98	System operating in full

1.35 Meanwhile, the NHS has made interim provision for the continued support of publicly-funded (principally MRC) clinical trials, as recommended by the Culyer report (paragraph 4.2), pending the new arrangements arising from the report (p368). Several RHAs had already made interim arrangements as part of their own R&D Plans (see Appendix 8). Executive letter EL(95)33 dated 10 March 1995 says, "Excess service costs of publicly funded research should be met by the NHS...Responsibility for financing excess service costs rests primarily with NHS service providers, in consultation as necessary with the RDRD". The letter provides that "MRC researchers" proposing a project with service support implications should contact the "lead provider" and the RDRD as soon as possible, with a view to reaching agreement on scale, cost and timing. If the outcome of the research might have "significant cost implications for the NHS", the "lead purchaser" is also to be consulted. Providers are expected to reach agreement with researchers "without delay unless there are justifiable reasons for not doing so"; and researchers may invite the RDRD to mediate if they feel that a provider or purchaser is being obstructive. However, "the MRC will not action awards for clinical research in the NHS before arrangements have been agreed on the provision and cost of NHS support". The NHS and the MRC are to keep each other informed, to avoid one wasting time on a proposal which the other has rejected.

BOX 7: CENTRAL RESEARCH AND DEVELOPMENT COMMITTEE (CRDC)

Terms of Reference

Taking into account any direction from the NHS Executive (following advice from the National Forum and Regional R&D Committees), to advise the Director of Research and Development (DRD), and through DRD the NHS Executive Board, on:

(i) the apportionment of the R&D budget *between*:

(a) NHS funded R&D;
(b) support for research sponsored by other funders in the NHS;
(c) research facilities;
(d) support for information systems and related activities to collate, disseminate, promote and exploit the implementation of R&D findings and record details of R&D projects in planning and in progress; and
(e) support for development of the research capacity needed to sustain work of direct value to the NHS;

(ii) principles and criteria for decisions on funding within each of the categories at (i) above;

(iii) routine application of the principles and criteria at (ii) above to assess competing claims for national funding. This includes advising on:

(a) priorities for NHS funded R&D; and
(b) priorities for service support of R&D;

(iv) improving the dissemination, usefulness and uptake of research results into all procedures intended to maintain and improve health;

(v) evaluation of the R&D strategy, and in particular:

(a) outcome indicators for work in each of the categories in (i) above;
(b) the routine application of these outcome indicators to evaluate work supported within each of the categories;

(vi) any other matter relating to research and development remitted to the Committee by the Director of Research and Development.

Membership

Michael Peckham (Chairman), Director of Research and Development
* **George Barnes**, Chief Executive, East Riding Health Purchasing Authority
Martin Bobrow, Professor of Medical Genetics, Cambridge University; Chairman, Cochrane Centre Steering Committee
Anthony Culyer, Professor of Economics, Deputy Vice Chancellor, University of York, Chairman, NHS Research and Development Task Force
* **Christopher Davies**, Director of Social Services, Somerset County Council
Liam Donaldson, Regional Director and Regional Director of Public Health, Northern and Yorkshire Regional Health Authority/Regional Office

continued

* **Peter Doyle**, Executive Director, Zeneca, Chairman, ACOST Committee on Medical Research and Health
* **Ruth Evans**, Chairman, National Consumer Council
* **John Gabbay**, Director, Institute of Public Health, Winchester
* **Malcolm Green**, Director, British Postgraduate Medical Federation, Consultant Physician, Royal Brompton National Heart and Lung Hospital
* **Andrew Haines**, Professor of Primary Health Care, University College London Medical School, Regional Director of R&D, North Thames RHA/Regional Office
* **Christopher Heath**, General Practitioner, Bromsgrove
* **Stephen Holgate**, Professor of Immunopharmacology, University of Southampton, NHS Director of Clinical Trials
* **Miles Irving**, Professor of Surgery, University of Manchester, Chairman, Standing Group on Health Technology
* **John James**, Chief Executive, Kensington, Chelsea and Westminster Commissioning Agency
* **Peter Kennedy**, Chief Executive, York Health Service NHS Trust
Kay Tee Khaw, Professor of Clinical Gerontology, University of Cambridge, Member, Medical Committee, Higher Education Funding Council for England
* **Sally MacIntyre**, Director, MRC Medical Sociology Research Unit, University of Glasgow
* **David Pace**, Regional Director of Finance, South Thames RHA/Regional Office
* **Maggie Pearson**, Professor of Health and Community Care, University of Liverpool
Sir Dai Rees, Secretary, Medical Research Council
* **Michael Smith**, Professor of Medical Physics, University of Leeds
* **Gordon Stirrat**, Professor of Obstetrics & Gynaecology, University of Bristol, Dean, Bristol University Medical School
Barbara Stocking, Regional Director, Anglia & Oxford Regional Health Authority/Regional Office
John Swales, Professor of Medicine, University of Leicester

Those marked * are new members named in December 1994. The previous composition of the CRDC is set out on p2.

1.36 The MRC welcomes these interim arrangements (p455). However they will monitor them "to see how they work in practice, and to establish whether they deliver the support needed without excessive bureaucracy, particularly in relation to the support necessary to provide services or drugs that are being evaluated, and for support of clinical research of longer term relevance to the NHS".

1.37 In April 1995 Professor Peckham published "Supporting R&D in the NHS: Implementation Plan". This document confirmed the timetable for implementing the Culyer report described above, but gives few details of how implementation will be achieved.

1.38 The Culyer report was written for the NHS in England. However its recommendations are likely to be substantially implemented in Scotland, Wales and Northern Ireland.

Health Authorities Act 1995

1.39 The Health Authorities Act 1995 (still a Bill at time of writing) will transform the superstructure of the NHS in England from 1 April 1996. District Health Authorities (DHAs) and Family Health Service Authorities (FHSAs), some of which are already working together as Health Commissions, will be merged into unitary Health Authorities. Regional Health Authorities will be abolished; their place will be taken by regional offices of the NHS Executive (NHSE).

1.40 According to a document called "R&D in the new NHS", produced by the Department of Health (pp13-22), and the job description of the new full-time Regional Directors of R&D (RDRDs) currently being appointed (p198), RDRDs will continue to carry out the following

BOX 8: THE NATIONAL FORUM

Membership

The Forum will be chaired by the Director of Research and Development. Representatives of the NHS, the Health Departments, the Research Councils, the Association of Medical Research Charities, the Wellcome Trust, the Higher Education Funding Councils, the Association of the British Pharmaceutical Industry, the Association of British HealthCare Industries, and the Office of Science and Technology will be invited to participate.

Terms of reference

1. To advise the Director of Research and Development, and through DRD the Secretary of State for Health, on:

- current national and international strategic issues relating to research and development of importance to the NHS;
- advances in science and technology which may impact on health care;
- technology transfer, covering links between basic science, applied research and health services;
- the development of co-ordinated systems for information derived from and about research;
- the capacity, and ways to increase the capacity, for undertaking research and development, including health services research, needed by the NHS;
- any other matter relating to research and development remitted to the Forum by the Director of Research and Development.

2. With a view to setting a strategic framework for the Central Research and Development Committee, to advise the Director of Research and Development, and through DRD the NHS Executive Board, on:

- the overall pattern of funding for research and development, and the plans and priorities of individual research funding systems;
- the needs for NHS support for externally sponsored research and development within the NHS;
- progress on the establishment and operation of new systems for funding and supporting research and development in the NHS.

functions, working within each new Regional Office of the NHSE "as part of its regional top management team":

(i) commission R&D on topics prioritised by local R&D committees;

(ii) administer locally responsive research grants, advised by local peer review committees;

(iii) manage the research element of SIFTR;

(iv) manage training schemes for health services researchers;

(v) manage the Project Register;

(vi) cultivate R&D networks; promote innovation, evaluation and implementation; "hold field [ie purchasers and providers] to account for use of R&D findings".

1.41 Where RHAs have provided long-term funding for research centres or units, this will be taken over by the central R&D Directorate, "to ensure consistent standards of competition and quality...and co-ordination with support for units in the DH Centrally Commissioned Programme of research". The arrangements whereby some CRDC programmes are commissioned and managed by RDRDs "will continue but will be reviewed in the light of the developing workloads and staffing arrangements in RDD and regional offices".

1.42 When we met Professor Peckham in March, however, he indicated (Q1279) that more far-reaching changes to the organisation of the Strategy are planned for autumn 1995. In place of "Research for Health" and the Regional R&D Plans, a single annual plan will be produced covering NHS R&D activities run from London, Leeds and the regional offices. The distinction between national (CRDC) priorities and regional priorities will be abolished, leaving a single category of "important R&D". The RDRDs will function as a team, sharing national responsibilities.

Acknowledgements

1.43 We are grateful to all those who have given us evidence, whether face to face or in writing. We are especially grateful to the Vice-Chancellor and staff of the Queen's University of Belfast, who received us hospitably on 14 February; to the Officers and Fellows of the Royal Society of Edinburgh (RSE), who opened their house to us on 28 February; and to Professor Samuel Thier, President of Massachusetts General Hospital and Professor of Medicine and of Health Care Policy at Harvard Medical School, who took time during a visit to London in January to meet us and explain the US perspective on the issues before us. Finally, we acknowledge the invaluable assistance and cogent advice of our Specialist Adviser, Sir Keith Peters FRS, Regius Professor of Physic in the University of Cambridge.

1.44 The members of the Sub-Committee which prepared this report are listed in Appendix 1. Our witnesses are listed in Appendix 2. Their evidence is printed in two volumes, HL Paper 12-I (up to December 1994, ISBN 0 10 478495 4, HMSO £16.60) and HL Paper 12-II (since January 1995, ISBN 0 10 482395 X, HMSO £35.50 net).

CHAPTER 2 THE R&D STRATEGY

A popular initiative

2.1 The NHS R&D Strategy receives endorsement from across the spectrum of health care and research:

— "The commitment of the Government to implement [the report of 1988] and the creation of the R&D Directorate are great successes...The greatest single achievement of the NHS R&D Strategy has been to create within the NHS a belief in, and a strategy for, a knowledge-based health service...Michael Peckham has been in post as Director of R&D for only four years. The achievements in this time have been substantial...The Culyer report...could not have taken place without the R&D Strategy firmly in place" (Dr Malcolm Green, Director of the British Postgraduate Medical Federation, p209).

— "We have always welcomed the setting up of the NHS R&D Directorate under the leadership of Professor Michael Peckham...The development of the Directorate has continued to command our respect and support" (ABPI, p245).

— "In general we are impressed by the NHS R&D Strategy. We like the idea that it is putting R&D on the agenda of the Trusts, the purchasers and the NHS Executive, and that it is involving all the professions...in a much more accountable and open way. We believe that it is important to emphasise what the R&D Strategy does emphasise, that good practice is dependent on good research evidence" (Professor Sir Leslie Turnberg, President of the Royal College of Physicians, speaking for the Conference of Medical Royal Colleges, Q871).

— "The professions in which I am involved are particularly keen on the Peckham initiative. They applaud and appreciate the way it is going forward" (Dr Pam Enderby, Chairman, College of Speech and Language Therapists, Q1304);

— "We...wish to congratulate Professor Peckham and his colleagues on successfully raising the profile for research in the NHS through securing more funding and establishing a national research infrastructure. We particularly commend the stance taken...in promoting health services research as an important contribution to knowledge generation and improving services" (RCN p329).

— "The British Medical Association (BMA) has fully supported the NHS R&D Strategy, viewing it as a long overdue initiative for co-ordinating and stimulating research within the NHS" (p403).

2.2 **We warmly congratulate Professor Michael Peckham on the success of the NHS R&D Strategy so far**. A great deal has been achieved, in just four years, towards meeting the need which this Committee identified in 1988 for the NHS to engage actively with the research community. **Likewise we congratulate the first generation of RDRDs, who have succeeded in making the Strategy a reality at "field" level; and we commend the personal commitment of the Secretary of State for Health, who has backed the Strategy with political will and real shifts of resources**. Of all the NHS reforms since 1990, the R&D Strategy is certainly the one least widely known; but, among those who are aware of it, it is, we suspect, the one most unequivocally welcomed.

2.3 In the course of this enquiry, we have received comments on the Strategy from witnesses across the whole range of health services, from NHS management to research in all its forms. These comments are set out in detail in Appendix 6. They include criticisms and words of warning. Not one, however, is outrightly hostile to the Strategy; not one suggests that it is consuming too large a share of NHS resources; and such criticisms and cautions as we have received are almost all, we believe, offered in a constructive spirit. It is in that spirit that we offer the following recommendations.

Biomedical research and health services research

2.4 The principal issue which emerges from our evidence is the perceived balance of the Strategy between biomedical research on the one hand - the search for generalisable truths about the working of the human body in health and disease - and, on the other hand, "health services research", systematic enquiry into the health needs of a particular population and into the provision of services to meet those needs. (Full definitions, with examples, are given in Appendix 3.) Witnesses who welcome the growth of health services research are nevertheless concerned that the clinical component of biomedical research may consequently receive less than its necessary share of NHS support (Appendix 6 paragraphs 1-8).

2.5 This Committee called in 1988 for the NHS to create a programme of research led by the needs of health services, to complement the "science-driven" biomedical programmes funded largely by the MRC, the research charities and the universities. Many of these "science-driven" programmes end up by meeting quite obvious "needs" of the health services. The Strategy also quite properly envisages that the NHS itself may identify and fund other needs which call for biomedical research, needs not already funded by non-NHS sources. NHS problems may be best solved by biomedical means, or by the application of public health research or management science, or in many cases by a combination of all three. (Examples of fields in which biomedical and public health approaches interact are vaccination, and the fast-developing genetic approach to public health involving screening for genetic disorders.) The aim of the Strategy should be not only to fund the complementary health services research, but also to harness all forms of research to the needs of the NHS. We are fully satisfied that this is the approach taken by Professor Peckham and his team of RDRDs.

2.6 All clinical biomedical research projects, most of which are not NHS funded, nevertheless require access to patients and services in NHS hospitals and thus call for very considerable NHS expenditure to support them. As we described in paragraphs 1.11 and 1.12, implementation of the Strategy led to the establishment of the CRDC who under their terms of reference adopted a "problem-led" approach as opposed to a "science-driven" approach. This has raised major concerns expressed to us (Appendix 6 paragraphs 1-8) about the future funding of the clinical component of biomedical research. There are for example legitimate grounds for concern about the financing of the infrastructure for clinical research in the major university hospitals, and about arrangements for NHS service support for clinical trials; we discuss these and other concerns below. The cause of these concerns is not primarily the growth of health services research which we applaud, but rather the fear that it will grow at the expense of rather than as a complement to clinical biomedical research.

2.7 Our report of 1988 called not only for research led by NHS needs, but also for "the tradition of investigator-initiated medical research", represented by the MRC, "to be preserved". We are therefore somewhat concerned to see NHS needs-led research creeping up the agenda of the MRC, through the operation of the Concordat and the activities of the Health Services and Public Health Research Board (Appendix 4 paragraph 48). The MRC has a legitimate role in supporting development of methodologies for various aspects of public health research, and indeed deserves credit for evolving some of the methodology used in this field, most notably the randomised controlled trial. We acknowledge the history of the Concordat (it was the price paid by the MRC in 1981 for the return of moneys transferred to the Department of Health following the Rothschild report), and the drive signalled in the Science White Paper "Realising our potential" of 1993 to make all the Research Councils more responsive to the needs of their "users". But the MRC has always been the model of a "mission-oriented" Research Council; it would be unfortunate if, by succumbing to "mission drift" into territory now properly occupied by the NHS R&D Strategy, the MRC were to leave unfunded even more alpha-rated projects capable of underpinning biomedical science than there are already (Appendix 6 paragraphs 5-6). Basic research advances step by step, but the next step is not always clearly seen until the previous step has been taken. Thus for some alpha-rated projects it may be hard to see when or how they will, in either the short or long term, be of potential value to the NHS. With this in mind, **we recommend that, at the next revision of the Concordat, the relationship between the missions of the MRC and the NHS R&D Strategy should be clarified**.

Director of R&D and Regional Directors of R&D

2.8 Researchers from all disciplines should be delighted that the R&D Strategy has placed senior researchers in positions of authority in the NHS. The Director of R&D is a full member of the Executive Board, with easy access to the Secretary of State; the RDRDs are to be part of the top management team in the new regional offices; between them they will control one of the few central budgets left in the NHS. So far these important posts have been filled by experienced and respected researchers, with, in the case of the RDRDs, one foot still in the academic world.

2.9 We accept that the job of RDRD is now likely to occupy most, if not all, of one person's time (Appendix 6 paragraphs 9-11). However we see substantial advantages in continuing the tradition that the Regional Director should be a researcher first and a civil servant second. Therefore **we recommend that the DRD and the RDRDs should continue to be drawn from the higher levels of the research community; that the universities (including those with no medical school but with an established record of strength in other health-related disciplines) should be formally involved in their appointment; and that the RDRDs should have the assistance of Associate Directors, enabling them to retain a footing in research and/or clinical work.** Directors appointed in this way will be able to inform NHS policy-making at the highest levels with the research perspective, while retaining the confidence of the research community when hard choices are called for.

2.10 The move to single-centre working in April 1996 will diminish the RDRDs' autonomy and local discretion, which has hitherto been used in diverse and imaginative ways as shown in Appendix 8. We do not consider that this change will work to the advantage of the R&D Strategy. **We recommend that the new central R&D plan should involve a good measure of devolved responsibility, permitting each RDRD to take independent action within the Region, including where appropriate identifying and funding regional priority programmes and exploiting and fostering local research talent.**

Locally-operated responsive funding

2.11 One important function of the RDRD is the provision at local level of relatively small grants in response to unsolicited research proposals. This function, which predates the Strategy, used to be called LORS. Every RDRD still operates a responsive grant scheme; but, as Appendix 8 shows, some are tied more or less tightly to national and regional priority areas for research, one at least (North Thames) excludes biomedical research altogether, and the proportion of the R&D budget devoted to responsive funding is very variable, between 28 per cent (Anglia and Oxford) and 16 per cent (West Midlands).

2.12 These schemes are a vital part of the matrix of research support. They enable young people with good ideas, but with insufficient experience to attract funding from national charities or the MRC, to take their first steps in research. **We therefore welcome Professor Peckham's assurance that responsive funding at regional level will continue** (Appendix 6 paragraph 20). **Peer review should continue to apply; criteria of relevance should not be unduly restrictive; and biomedical projects must not be arbitrarily excluded.**

Networking: "hearts and minds"

2.13 The other aspect of the role of the Directors of R&D, national and regional, which we consider most important, is that of ambassador, networker and go-between: persuading researchers to apply their talents at least in some measure to the needs of the NHS on the one hand, and on the other inducing NHS managers to provide facilities for research without undue expectation of short-term returns, and to take research findings seriously. Our evidence suggests that, while Professor Peckham has succeeded in placing R&D high on the agenda of the NHSE (Appendix 6 paragraph 22), and while at local level the RDRDs are doing all the right things (Appendix 6 paragraph 25), there is still much work to be done before all local purchasers and providers across the field come to see research as an investment for the benefit of the NHS.

2.14 **We encourage the new RDRDs to retain networking, especially in relation to health services research and research in primary care, and research involving non-medical scientists**

and the professions allied to medicine, as one of their top priorities. But the RDRD cannot be expected to make all the running in the new enlarged regions. **We recommend that a mechanism be established through which researchers from all disciplines can meet managers at local level at every possible opportunity, to discuss needs, opportunities and conflicts of interest**, and to build genuine "healthy alliances" to underpin the new knowledge-based NHS.

2.15 The relationship between the research community and the purchasers, ie the new Health Authorities and fundholding GPs, is important. Researchers should meet provider (Trust) managers every day in the corridors of the university hospitals; but in the last resort providers can only do what purchasers are prepared to pay for. **We welcome the Government's assurances** (given during the passage of the Health Authorities Bill, Lords *Hansard* 6 March 1995 cols 14, 71) **that the universities will be represented on Health Authority Boards. We recommend that some means be found to connect the research community with GP fundholders and to educate them as to the impact of their purchasing decisions on research, since their role as purchasers is of growing significance**.

Dissemination and implementation

2.16 The structures of the R&D Strategy are bedding down and research results are beginning to come through. The challenge for the next phase of the Strategy is to disseminate those results to purchasers, practitioners and (importantly) the public, with a view to getting them into practice. **We approve of the steps taken so far in these areas**; we look forward in the medium term to seeing measurable results, in terms of improved outcomes and efficiency savings.

2.17 In particular we **welcome the foundation of the Cochrane and York Centres** (Appendix 6 paragraph 29). We note the concerns of some of our witnesses about the potential perils of meta-analysis (see Appendix 3); we are confident that Dr Chalmers and his colleagues at the Cochrane Centre are aware of the possible pitfalls of using such techniques, and will not be tempted to push them beyond their proper limits. We are confident too that Mr Sheldon and the staff of the York Centre are mindful of the "information overload" which already afflicts conscientious practitioners, and will use every possible technique, including information technology, to help the users of research find their way quickly to the information they need.

2.18 Continuing education is now comparatively well developed in medicine, and developing in all health care professions. **There is an obvious need for the outputs of the R&D Strategy, such as the material produced by the York and Cochrane Centres, to be taken into account by those responsible for its content; but Effective Health Care Bulletins are no substitute for continuing professional education.**

2.19 Implementation - getting research into practice - is, in the context of health care, a complex and sensitive issue. **We commend the CRDC's initiative in setting up an Advisory Group on implementation, with a view to commissioning research in this area** (Appendix 6 paragraph 36).

2.20 Some of our witnesses expressed reservations about the imposition of evidence-based practice upon practitioners (Appendix 6 paragraph 34), on the ground that the "evidence" is unlikely to be complete in relation to any particular patient or case. This point is well made, and we draw it to the attention of the NHS. **For purchasers' contracts and providers' protocols to be based on critical appraisal of the latest research can only be good for the health service; but the informed and innovative practitioner must remain free to override "evidence" if it is either incomplete in the context of the case, or out of date.** We would add that "evidence" will only express consolidated knowledge; **clinical researchers are constantly enlarging the frontiers of knowledge, and must not be held back rigidly within the boundaries of what is known at a particular time.**

Commissioned research

2.21 We have not carried out a full survey of the CRDC's progress towards commissioning research in its priority areas. However we have received some observations on this element of the Strategy (Appendix 6 paragraphs 40-49), which we pass on to Professor Peckham and his successor, who will start work in January 1996.

CHAPTER 3 THE CULYER REPORT

A necessary initiative

3.1 Professor Peckham told us in November (Q1) that in general the Culyer report had been well received; Professor Culyer said the same in January (Q501); and our evidence tells the same story (CDMS p73; MRC p45; AMRC Q183; SCOPME p471; RAEng p459; ABPI p245; NAHAT Q923; RCN p331; RCGP p130). However, in Professor Culyer's own words (Q500), "The Task Force really focused on principles, structure and...an enabling framework", leaving much to depend on the details of implementation.

3.2 We greatly regret the erosion of the principle of uncosted mutual support, or "knock-for-knock", in the relations between the NHS and academic medicine (see Appendix 4 paragraph 5), contrary to the advice of this Committee in 1988 and of SGUMDER (the joint DH-DFE Steering Group on Undergraduate Medical and Dental Education and Research) in 1990; but we accept that the market does not permit such an arrangement. We predict that the cost of separating the scientist from the clinician will be high, both in transaction costs, and in the creative interactions which will not take place at all because busy people cannot tolerate the artificiality of costing and accounting for them. We note that, though the NHS has become very conscious of what it gives under "knock-for-knock", no-one has costed what it gets; if bills begin to come in for clinical services provided within the NHS by clinical academics, who undertake little or no private practice, the arithmetic of costs and benefits may look significantly different. Overall, we suspect that the sum of the disaggregated parts may do significantly less for the health of the nation than did the whole.

3.3 However, the market is in operation, and is already doing serious damage to academic medicine, and particularly to curiosity-driven clinical research. **We commend the Government for acknowledging the problem by setting up a Task Force; and we warmly congratulate Professor Culyer and his team for producing, against a very tight deadline, a set of principles which command general assent. It is now up to the research community and the NHS to translate those principles into procedures which will safeguard and foster UK medical research**, whether commissioned by the NHS or funded by other bodies, **for the benefit of health and health services in the future**. The evidence which we have received on various issues involved in implementing the Culyer report, and on which the observations which follow are based, is set out in detail in Appendix 7.

3.4 We cannot resist observing that several salient features of the new order were recommended by this Committee in 1988 but turned down by the Government at that time: notably the financing of NHS R&D by "mandatory contributions" from Health Authorities' allocations, the provision of infrastructure funds on the basis of assessment involving a degree of selectivity, and the creation of a national forum.

The R&D levy

3.5 **We welcome the creation of a compulsory levy on all purchasers' allocations to furnish the NHS R&D Budget**. We note with approval that the levy will be applied to GP fundholders as well as Health Authorities (Appendix 7 paragraph 10). We welcome Professor Peckham's statements that the size of the levy will be "demand-led", and that, though purchasers will be involved in annual discussions leading to the fixing of the size of the levy, they will not have a veto (Appendix 7 paragraphs 7-9).

Research facilities funding

3.6 **We welcome the creation of a stream of "research facilities funding" to support the additional infrastructure needed in NHS settings which support clinical research to a significant extent**. This stream will provide a rational and transparent substitute for the combination of SIFTR, "non-SIFTR" and central subvention for the Special Health Authorities. The principle of infrastructure funding is of vital importance: all clinical academic centres require a "sophistication factor" which cannot be attributed directly to particular projects, but which underpins them all.

3.7 Of equal importance, however, are the quantum of infrastructure funding, and its distribution (Appendix 7 paragraphs 12-15). We gather that it will be for the CRDC to advise on the proportion of the R&D Budget which will be devoted to this purpose. We welcome Professor Peckham's assurance that the baseline for research facilities funding will be historical. **The CRDC must resist the temptation progressively to shift the balance away from essential core funding in favour of project funding.**

3.8 We are not as much reassured as Professor Peckham may have intended by his declaration, "I do not think that medical schools that are carrying out good research will be disadvantaged". We understand it to be common ground that *all* medical and dental schools should be, and are indeed, carrying out some excellent research in certain fields in their associated NHS institutions: to quote the first of the Ten Key Principles promulgated by SGUMDER in 1990 and endorsed by the Secretaries of State for Health and Education, "The aim of undergraduate medical and dental education is to produce doctors and dentists who are able to meet the present and future needs of the health services; to this end, future doctors and dentists should be educated in an atmosphere which combines high professional standards...with a spirit of intellectual enquiry and innovation based on active research and development programmes". Indeed, an important component of the research activity of medical and dental schools is carried out by doctors and dentists in training as a fundamental part of that training. Similar principles are being progressively applied to the education of nurses, non-medical scientists working in hospital clinical departments, and other health care professionals. If NHS-supported research in hospitals and other settings associated with a medical or dental school is assessed as failing to exhibit excellence, the proper response, before planning to divert NHS resources elsewhere, would be to take steps to improve it.

3.9 Medical manpower planning currently demands an expansion of student numbers; to meet such a demand it might even be necessary to establish a new medical school. Research facilities funding must be sufficiently flexible to permit new planned developments, if necessary with new resources.

3.10 **It follows that the degree of selectivity in the allocation of research facilities funds among the major university hospitals and other clinical teaching centres should be relatively limited, and that all such hospitals should be guaranteed a level of core funding from the R&D budget, on the basis of assessment, sufficient to sustain research activity into the longer term. This provision should also apply to the former Special Health Authority hospitals in London** (see Appendix 4 paragraph 38). These must be permanent features of the system, not merely transitional measures. In this respect NHS research facilities funding will differ from the "QR" allocated selectively among the universities by the HEFCs. The difference is justified: the medical schools are few in number; their total capacity is controlled by the health departments; the calibre of their students and staff is high; and all undergraduate medical students proceed after graduation to a period of postgraduate training including some involvement in or at least exposure to research.

3.11 The prospect of a new, free-standing research assessment exercise, to inform the allocation of research facilities funding among the major university hospitals, fills our witnesses with a dismay which we fully share (Appendix 7 paragraphs 25-27). The HEFCs have discussed with the NHS R&D Directorate the scope for integrating NHS assessment with the HEFCs' Assessment Exercise, and have concluded that it cannot be done. This is not good enough; **if the creative thinkers in clinical departments are to have time to think, the two exercises *must* be integrated, and we do not believe that devising means of doing so is beyond the wit of the two great Departments of State responsible.**

3.12 We propose the following solution. Hospitals bidding for funding should be grouped according to the university with which they are principally associated. An amount of money should then be allocated to each group in proportion, among other factors, to the research rating of the relevant units of assessment in the university in question. Within each group, the money would be distributed by a local committee chaired by a nominee of the medical or dental school; the RDRD would act as moderator in case of disagreement. There are no doubt valid objections to such a system; but in our view the creation of a new assessment exercise, with all the attendant costs of resources and senior staff time, is absolutely out of the question.

Pre-protocol research

3.13 **Pre-protocol, curiosity-driven research** (see Appendix 3) **is not an indulgence or an optional extra; it is how many revolutionary research ideas begin**. The Culyer report has been widely understood to recommend that such research should depend for support on the goodwill of local purchasers and providers (Appendix 7 paragraphs 29-38).

3.14 This appears to be a misunderstanding. The Culyer report identifies pre-protocol research as one element of the "implicit" research which at present is conducted at the expense of local providers and purchasers, and recommends that this element (and this alone) should remain implicit, ie should not require to be costed, accounted for and "declared" into the single funding stream. We agree: it is almost definitive of this vital form of research activity that it cannot be tracked and costed; it is largely conducted in the minds of research-active staff in the course of their normal duties. **We welcome assurances from NAHAT that purchasers accept that "an enquiring, questioning approach is an essential element of the good clinical practice being purchased", and that low-cost or no-cost research activities, for instance inexpensive tests on patients already in hospital, are not to be accounted for**.

3.15 However the Culyer report may be taken to imply (at paragraph 3.45) that pre-protocol research may also be a proper charge on the R&D levy. **In our opinion the levy will be the appropriate source of support for pre-protocol research activities only when the costs are non-trivial, and therefore cannot reasonably be charged to purchasers**. The volume of this category of activity should be contained: activity involving significant cost should be regulated by protocol sooner rather than later. **Nonetheless, it is essential that an allowance for curiosity-driven research is built in to all NHS R&D project, programme and service support funding, as an increment of a few per cent on each allocation over and above the identified need**. Such an allowance, combined with research facilities funding for the major centres, will provide the "seedcorn" needed to enable early ideas - and "early people" (Professor John Swales' expression) - to begin to grow, without imposing on purchasers. Without it, or something like it, to enable NHS staff in all settings and disciplines to follow up their own ideas in a climate of research opportunity, the knowledge-based culture which the NHS rightly desires will never take root.

Research outside the major university hospitals

3.16 The Culyer report envisages that all NHS settings will compete for R&D funding on equal terms (paragraphs 3.68-71). We support this as a principle. However we are not convinced that it will work in practice: depending upon the method of allocation, either a disproportionate share of the available resource will be dispersed among innovative GP practices, community health centres and other peripheral locations, leaving the university hospitals under-resourced; or the university hospitals will attract all the funds to themselves, leaving nothing to support smaller research facilities in peripheral and community settings. Devising a method of allocation which strikes the right balance, and channels appropriate support to both large facilities and small facilities, may prove difficult.

3.17 It is important that this balance be struck. The evidence set out in full in Appendix 10 shows that, while the research effort of doctors, dentists and scientists in university hospitals remains of vital importance, it must increasingly share resources with research in primary care settings, and research in what Professor Culyer calls the "Cinderella disciplines": general practice, nursing, midwifery and health visiting and the professions allied to medicine. In all these areas research is needed, but research capacity cannot be built up overnight.

3.18 **We therefore look forward to the NHS research capacity strategy** (see above, paragraph 1.18), **which will direct resources to research training in these important, developing and under-resourced disciplines. In the context of the research capacity strategy, we recommend that a distinct stream of funds should be identified within the R&D levy, to underpin research in primary care, general practice and community settings, leaving research**

facilities funding as conceived by the Culyer report to be confined to supporting hospital-based and relevant university-based research. The latter can be adequately distributed from the centre; but **the former should be devolved for more discriminating distribution to the RDRDs, who should have discretion to distribute it in ways appropriate to local strengths and needs, in the form of GP research practice grants, support for research sessions for GPs, non-medical scientists, nurses, midwives, health visitors and other health care professionals, capital grant or any other appropriate mode of funding**. The RDRD is particularly well placed to support research into the implementation of care in the community, and into the integration of primary services, taking into full account the concerns of the patient.

Service support funding

3.19 **We welcome the interim arrangements recently announced for provision of NHS service support for clinical research, and the proposal to make service support funding available from the R&D levy**.

3.20 We see no case (Appendix 7 paragraph 39) for requiring research grant applications to be "signed off" by the NHS providers principally concerned. If this requirement is imposed on every research proposal from the moment of first formulation, an enormous amount of time will be wasted in costing and vetting proposals which will ultimately be rejected by the funding body to whom application is made. We propose a compromise: **the requirement for signing-off should be imposed not at the time of application, but only once an award has been offered, before final acceptance by the host university or hospital department; and it should not be imposed at all on awards from the MRC**.

3.21 The Culyer report recommends (paragraph 3.9) that service support funded from the new R&D Budget should be subject to priority-setting by the CRDC on a similar basis to commissioned research. We agree with those of our witnesses (Appendix 7 paragraph 44) who see a danger that by this means the priorities of the CRDC will be imposed across the board, and the plurality of funding which has traditionally underpinned UK medical research will in practice be lost. Hitherto, the CRDC has been responsible for directing a needs-led programme, consisting largely of health services research, to complement the more science-led and more biomedical programmes of the MRC and the charities (see above, paragraph 2.6). Through the power to control service support funding, the CRDC will now have a negative power over these peer-reviewed and selected science-led programmes; indeed, through the new National Forum, they may acquire an increase of positive influence as well. As this Committee observed in 1988, **both the needs-led and the science-led approaches are important to the NHS. We trust that the CRDC will recognise the dangers inherent in over-direction; we recommend they they should exercise control over service support funding for investigator-led research with a very light hand, and should refuse it only in exceptional circumstances**.

3.22 The Culyer report recommends that the NHS-MRC Concordat be revised so as to put the MRC in open competition for NHS service support with other research funders (Appendix 7 paragraphs 47-50). We consider that this proposal fails to recognise the position of the MRC, as a publicly-funded body subject to direction by the Secretary of State, funding research in all disciplines according to the highest standards of peer review. We are aware of the attraction of the "level playing-field"; but we are not persuaded that levelling this particular playing-field would be to the advantage of the NHS; and we note that Professor Culyer himself acknowledges that in practice the Concordat works well. **We recommend that the MRC should continue to have first call on NHS resources for service support, subject to the Concordat**. There may be a case for more formal understandings between the NHS and the research charities, in particular the Wellcome Trust; but any such understandings will have to take account of each charity's independence and individual research objectives.

3.23 **Arrangements for NHS service support for research funded by the MRC and other bodies should be compatible in England, Scotland, Wales and Northern Ireland**, since all the major research-funding bodies concerned operate on a nationwide or international basis (Appendix 7 paragraph 51).

Service increment for teaching

3.24 The Culyer report made recommendations for the future use of that part of SIFTR which supports research, but support for teaching was outside the Task Force's remit. Following the Culyer report, however, the NHS has been considering how to allocate the teaching portion of SIFTR, which has been set at 75 per cent of the current total sum, and will be funded from a separate "levy".

3.25 At the time of writing, we do not know what system will emerge. We consider that it must display the following features:

(i) **It must be simple**. Any further significant addition to the administrative load on senior staff in university hospitals would be unacceptable.

(ii) **It must conform to a high degree to the system for allocating research facilities funding**. Research and teaching are distinguishable outputs, but the inputs of resources, people and activity are to a large extent the same. The chosen systems must not result in significantly different distributions of infrastructure funds for teaching and infrastructure funds for research, or even allow that possibility.

3.26 It should be remembered that the disaggregation of the excess costs of university hospitals between teaching and research in the ratio 75:25 is no more than a working assumption (see Appendix 4 paragraph 27). **Unless research facilities funds and teaching funds are to flow down all-but-parallel channels, this ratio will require to be put right before disaggregation takes effect**.

3.27 The Culyer report implementation plan announces a Working Party on the Teaching-Research Interface. We commend the above recommendations, and the evidence on which they are based, to that group.

Innovative services

3.28 It has come to our attention (Appendix 6 paragraph 37) that there may be a gap in the chain of NHS support for R&D towards the end of the path towards implementation, at the point where a new technique of proven clinical benefit is first introduced into service. The problem is most acute for purchasers whose contracts lie largely with a university hospital, since they will be first to be faced with the short-term start-up costs of purchasing innovative services.

3.29 This is not a new problem; it is an inevitable consequence of the accepted principle of weighted capitation. SIFTR provided a partial solution, to the extent that it acted as a provider subsidy to keep down the cost of purchasing services from university hospitals. The Culyer report (paragraph 3.118) recommends that this is not an appropriate call on the new R&D Budget, and that the cost of fully evaluated treatments should fall on the purchaser. This avoids the issue facing purchasers associated with academic centres, and leaves innovative diagnostic methods or treatments at risk of falling at the last fence. We recommend that **the excess cost of innovative services not yet adopted across the NHS** (and which are not eligible for funding as Supra-Regional Services) **should, for no more than two years, be a legitimate call either on the provider's research facilities funding, or on a separate regional R&D reserve allocated to the purchaser**.

3.30 The Culyer report implementation plan announces a further Working Party on Service Development. We commend this recommendation to that group.

Transaction costs

3.31 Finally, while the increased transparency promised by the Culyer report will be welcome if it can be achieved, we are alarmed at the mounting total of potential transaction costs (Appendix 7 paragraphs 55-57). Even if our recommendations set out above concerning research assessment (paragraph 3.12), signing-off for service support (paragraph 3.20) and teaching support (paragraph 3.25 (i)) are accepted in full, clinical researchers will still be left with a substantial additional burden of costing, accounting and peer review. Even before the new systems are in place, SIFTR is already being raided to pay for its own administration at provider level.

3.32 **We recommend that the baseline for the R&D levy should receive a permanent uprating of 5 per cent to allow for transaction costs.**

Adequacy of total resource

3.33 The evidence of our academic witnesses is that clinical academic medicine is not currently over-resourced. According to the Vice-Chancellors (Q156), "We are only barely able to operate effectively with what we have coming into our medical schools and associated hospitals at present". According to the Deans of Medical Schools (p80), "Unless the need to make protective provision...for the clinical bases associated with our medical schools is recognised, there will be progressive erosion of the critical links between the university biomedical science base and academic clinical work. We are unconvinced that the current level of SIFTR funding alone...does this". The Medical Committee of the UFC considered similar assertions in their 1st Report, March 1991; they found that, though in some cases the shortfall could be ascribed to local factors, in others it could not; and they noted that unlike other university departments, medical schools cannot raise money by enrolling extra students, because of the constraints of medical manpower planning.

3.34 The HEFCs (successors to the UFC and PCFC) accept (Q1331) that medical schools are not currently over-funded. The same could of course be said of any discipline in higher education; but the HEFCs went on to observe that medical departments are subject to a "squeeze from two directions" - the Department for Education (DFE) and the NHS; and that potential exists for "irrecoverable damage". The HEFCs are currently expected to find "efficiency gains" of 3 per cent every year (Q1366). The Deans of Medical Schools plead (p462), "imposing efficiency gains on the clinical academic disciplines has quite different consequences from those in other subject areas in universities", because of clinical academics' unique commitment to NHS clinical services (see Appendix 5 paragraph 28); but the HEFCs insist that they could not make additional provision for medicine without explicit Ministerial direction.

3.35 The Culyer proposals could, if inadequately resourced, make this situation worse. It is possible to envisage a radical shift of resources away from infrastructure funding into project funding (Appendix 7 paragraph 21), away from core support for major facilities into dispersed support for R&D in the primary sector and the community (Appendix 7 paragraph 13), and away from investigator-driven research into needs-led research (Appendix 6 paragraph 1, Appendix 7 paragraph 44), which, combined with new transaction costs, could mean the end of curiosity-driven clinical research in the major university hospitals.

3.36 We are confident that the CRDC will not wilfully allow this to happen. However, if the overall resource provided through the new levy were inadequate, the mere existence of these new calls on funding would inevitably mean that the major centres would get less; and our evidence shows that they have too little already.

3.37 We therefore welcome the announcement by the Secretary of State in November that SIFTR is to be increased by £40m for 1995-96 - though we note that the econometric study commissioned by SGUMDER recommended a much larger increase (Appendix 4 paragraph 19); and we welcome the Department of Health's continued commitment to raise the total of NHS expenditure on R&D to 1.5 per cent of the NHS budget. **We recommend that, as originally envisaged in *Research for Health*, this target be met in 1995-96**. A target is not a ceiling; if, as we suspect, 1.5 per cent turns out tc be still too little to exploit the opportunities developing under the R&D Strategy while honouring the commitments created by the Culyer report, then the Director of R&D will have our full support as he argues with the NHS Executive for a further increase in the levy.

CHAPTER 4 OTHER ISSUES

Patient flows and concentrations

4.1 Clinical medical research is often stimulated by "the single patient whose condition provides important insights into a whole area of cellular or organ function, or large groups of patients whose combined characteristics help to define a disease or clinical response" (AYMS p319). The patients may get to the researcher by tertiary referral from a district general hospital to a specialist centre, or by extra-contractual referral outside the contracts placed by local purchasers for the service in question, or both, or in other ways: see Box 9. Alternatively, patients may be recruited to a multi-centre trial (for definitions, see Appendix 3). It is common ground that referrals for some conditions are in decline due to the operation of the NHS internal market, since purchasers are unwilling to pay for them; and that in any case the trend in health service delivery is away from concentration of patients in specialist hospitals, towards local treatment and community care.

BOX 9: REFERRALS

A *secondary referral* refers a patient from GP to consultant. A *tertiary referral* refers a patient from one consultant to another. A *contractual referral* is one which falls within a purchaser-provider contract; an *extra-contractual referral* (ECR) is one which does not, and must therefore be specifically paid for.

Doctors are in theory free to refer patients according to their clinical judgement. Emergency ECRs are treated as emergencies; any discussion concerning payment takes place only after the patient has been treated.

Elective (non-urgent) secondary ECRs require prior approval by the purchaser. This may be withheld if the referral is not justified on clinical grounds, or if an alternative referral would be equally efficacious. Approval may be delayed if the purchasers cannot afford immediate treatment; purchasers are expected to fund treatment as quickly as they can, having regard to the clinical priority of each case.

Elective tertiary ECRs must be notified to the purchaser, but do not require prior authorisation.

ECRs account for about 2% of total purchasers' expenditure.

The Government has issued guidelines on Contracting for Specialised Services, intended to reduce transaction costs and avoid "unpredictable fluctuations in volumes and cost" by encouraging purchasers to "co-operate with one another so that there is a critical mass which is large enough to support these highly specialised units".

Source: DH p354; Lords *Hansard* 30 November 1994, col. 596.

4.2 In Scotland, implementation of the reforms is a year behind England, but Professor Christopher Edwards, Dean of Medicine at Edinburgh, tells us that referrals are already being affected (Q1020). Queen's University of Belfast is also concerned about patient flows (p219), but has had no problems yet (p222).

4.3 In its 1st Report, March 1991, the Medical Committee of the UFC concluded, "the potential impact of these changes...upon the universities with medical schools is very great, and has not been fully understood by some schools". The Committee considered that the impact would be greatest in London and other big cities, where teaching hospitals might receive up to two-thirds of their patients from outside their immediate District, and might need to contract with up to 70 DHAs to maintain their current workload. Within the hospital, Regional and supra-Regional specialties would probably be less affected than "the run-of-the-mill cases essential for teaching". Much would depend on the attitude of NHS Regional managers, which ranged "from firm public commitment to managing change in such a way that their teaching hospitals prospered, to those who believed that market forces would prevail". The Committee sounded a note of profound alarm about this, and called for "urgent corrective action". They warned that "Relocation of inner city medical schools to areas where more patients live has capital implications which the UFC cannot, at present, contemplate", and that "The problems are of such magnitude that it is doubtful whether they can be solved locally".

4.4 The UFC Medical Committee's 2nd report, March 1992, looked again at the impact of market forces on referrals. Most medical schools reported no shortage of "patients with common diseases needed for teaching", and some schools found that the system of extra-contractual referrals worked well in bringing specialised cases to the teaching hospital. Others however found the opposite: "The reluctance of some purchasers to permit patients to be referred to specialist centres was a worrying trend, which could at its worst threaten not only research but also the standard of care received by individual patients"; and the Committee were especially concerned for specialist clinics for common disorders, which are "invaluable resources for postgraduate teaching and research".

4.5 According to the MRC (Q76, p66), there are two distinct problems: one, extra-contractual tertiary referrals for rare conditions (as in the examples shown in Box 10); the other, major clinics for common disorders (eg diabetes, asthma), which could be treated locally but where a major clinic at an academic centre can set standards for clinical practice as well as furnishing a resource for teaching and research. Mr John James, a purchaser Chief Executive and a member of the Task Force, pointed out that the purchaser has no right to block a genuine tertiary referral; if these are falling off, "it might well be that it was the clinicians in local hospitals who were electing, now that they had the control of the resources, not to make the referrals" (Q505). In his view what is threatened by the market is the MRC's second category, "The traditional long-distance flows of cases which can perhaps be treated adequately in a local general hospital but which perhaps ought to be treated, if you take the research interest as foremost, in a specialist centre" (Q504). Two other members of the Task Force took issue with him (Q506): Professor Ingrid Allen declared that "the real problem is with rare diseases"; and Professor Robert Boyd, speaking from his experience as a purchaser Chairman, admitted that "there is indirect pressure on local clinicians to diminish the flow" of tertiary extra-contractual referrals (ECRs).

4.6 The Council of Deans of Medical Schools (CDMS) (Q126) offered us a slightly different distinction, between "obligatory referrals, such as to cancer centres or cardiac centres" on the one hand and "more problem case referral" on the other; it is in the latter area, they say, that numbers of referrals are dropping. The Conference of Colleges (Q911) know of "lots of examples" concerning patients with unusual diseases; they place the blame not on medical staff, but on "an economic interest"; and they note that discussion of this issue is hampered by a shortage of national data (Q920).

4.7 Several witnesses have drawn our attention to a paper published in the British Medical Journal (BMJ) on 13 August 1994 (p457): "Conducting clinical research in the new NHS: the model of cancer", by J F Smyth (ICRF Professor of Medical Oncology, Edinburgh University) and others on behalf of the UK Co-ordinating Committee on Cancer Research. The paper records that, while conducting randomised clinical trials "has never been easy", it is becoming harder. Many of the problems identified relate to the excess service and infrastructure costs of trials; but also the internal market is leading to more cancer patients being treated in a district general hospital rather than being referred to a specialist centre, which is bad for the patient and bad for research; and fundholding GPs are increasingly reluctant to pay for referrals for trial procedures or follow-up. "These problems have led to a worrying decrease in participation in clinical trials, even among many previously ardent trialists...there is now an air of apathy, with clinicians being disinclined to invest the substantial effort needed to initiate and sustain trials".

BOX 10: EXAMPLES OF PROBLEMS OVER REFERRALS

A. *Guillain-Barré Syndrome*

Tertiary referrals for this serious, disabling and potentially fatal condition to the Department of Neurology at Guy's Hospital in London have fallen from 20+ per annum in 1989-91 to four in the first ten months of 1994. Professor R Hughes reports, "Several consultants...have advised me that they have been inhibited from making referrals by the reluctance of their local health authorities to bear the costs". When referrals to Guy's began in 1985, mortality in SE England fell from 13 per cent to 2 per cent; "the major factor is likely to have been the concentration of patients in one unit". See p106.

B. *Soft Tissue Tumour diagnosis*

Tertiary referrals of soft tissue samples from within the UK to the Department of Histopathology at St Thomas' Hospital in London for diagnosis of problematical tumours rose from 209 in 1989 to a peak of 693 in 1992, of which 49 (7 per cent) came from the Imperial Cancer Research Fund or the Royal College of Surgeons and were therefore not charged by the Department; but fell to 506 in 1994, of which 120 (24 per cent) came from ICRF/RCS. In 15 per cent of cases referred, the initial diagnosis was found to have been wrong. See p445.

C. *Thyroid disorder*

In 1990 Dr Krish Chatterjee set out to study the clinical features of a genetic thyroid disorder. "Whereas in the past it would have been relatively easy to talk to my colleagues and get the patients to come to a central centre for assessment, with the changes that have taken place this has proved much more difficult. In general this is not a debilitating illness, and therefore making the cases extra-contractual referrals would not really have been justifiable". The problem was resolved with help from the Wellcome Trust. See Q1176.

4.8 The RSE speak for all when they say, "Some mechanism must be found for money to follow the patient" (p285); but they do not suggest how. We have received various recommendations for the support of research-related referrals. First, some witnesses envisage specialist centres using research facilities funding to support competitive prices for treatment of patients required for research (CDMS p74, Q125; MRC p64, Q77; Dr Green QQ615, 622; Conference of Colleges Q915).

4.9 Secondly, Professor Hughes proposes, "One method of mitigating these effects would be for investigators with grants to investigate or treat patients with certain conditions to be granted a licence to accept referrals from any UK health authority for that condition without attracting a charge". Professor Edwards has a similar proposal, for central funds to pay for referrals for which a clear academic case can be made (Q1020).

4.10 The Royal Academy of Engineering (RAEng) (p460) take an apocalyptic view: "Tertiary referrals are largely outmoded...There is a risk in the UK that a group of difficult patients will be created, too expensive for any Trust to treat, and with no home at all". They propose "a central medical centre of ultimate resource, to tackle the near impossible cases and medical issues", like the US National Institutes of Health at Bethesda (see Appendix 4). Sir Leslie Turnberg favours research beds (Q921): "For a very small investment in specific areas, one might get a considerable return". Professor Ingrid Allen is not so sure (Q534), and counsels caution. Professor Culyer considers that fully-funded research beds might be an appropriate use of research facilities funding (Q533), depending on "the strength of the case made and what other demands there were on the money".

4.11 Dr Green suggests two further possibilities (Q607). First, purchasers might establish a mutual insurance scheme, to share the cost of rare and complex cases. Secondly, specialist centres must ensure that purchasers know what special services they can provide and what sort of patients they are particularly keen to receive for research purposes. He is against designated research beds (Q623), "because I would like to see research-active hospitals having a...total commitment to the research ethos throughout the hospital". Sir Leslie points out (Q916) that, in a "cost-per-case" system, such as pertains in the USA, the economic disincentive against extra-contractual referrals would disappear.

4.12 The CDMS put it to us (Q126) that there is no such thing as a "referral for research purposes". Patients are referred to specialist clinics because they will receive there the best available care; the fact that, once there, they provide a resource for research, is a consequence rather than a cause. The Associaton of Young Medical Scientists (AYMS) makes the same point: "Research centres of excellence are also clinical and service centres of excellence, and emphasis on the latter must be maintained" (p319; cp BMA Q1375, Conference of Colleges QQ911, 914). According to the UKCCCR, "Several studies have shown that there is a survival advantage if [cancer] treatment is given in a specialist centre". Accordingly Professor Rona MacKie FRSE proposes another approach to sustaining patient flows: "The onus is on academic centres to prove their approaches to therapy are to the patients' benefit" (Q1050). Professor Trimble of Belfast (Q700) puts the dark side of this argument: if patients are not referred and consequently receive less than the best available treatment, "a few cases of litigation will probably solve this problem...but that will take a few years".

4.13 Several witnesses (Council of Deans p74; MRC p46; ARC p413) accuse the Culyer report of ignoring these issues. The Culyer report deals with extra-contractual referrals in paragraphs 3.42-44. It proposes that it should be possible for the NHS R&D budget, at national or regional level, to support extra-contractual referrals for research purposes - though admitting that the primary reason for a referral may not always be easy to determine. The AMRC welcomed this proposal, subject to the details of implementation (Q225).

4.14 Professor Culyer himself told us, "I regret that we did not give more time to addressing the issue of tertiary referrals, as it perhaps has given the impression we saw no problem there. In fact that was not our view, and I think the question of tertiary referrals is very important, but it is also very complex; it seems to me that it is a matter to be given the highest priority by the new CRDC" (Q504). He suggested that the answer to the problem would involve "a more planned approach to the location of major centres of tertiary referral", taking account of critical masses and "surrounding research and teaching synergies"; and might involve a role for a figure analogous to the new NHS Director of Trials.

4.15 Professor Peckham (QQ11-12, p383) acknowledged that there may be a case for central funding in this area. But he pointed also to "a broader issue, which is about reconciling the conduct of research with the future organisation of health services" by finding, for instance, new ways of conducting trials without concentrating patients in a single centre. Sir Miles Irving (Q1275) similarly sees scope for taking research out into the district general hospital; this can have "an enormous influence in stimulating interest within those hospitals in the whole research exercise". Queen's University of Belfast reckons, "The way forward is to collaborate with general practice and undertake research in the community" (p222). As Professor Maggie Pearson, a Professor of Health and Community Care and a member of the Task Force, put it (Q502), "Just as people talk about the money following the patient, clearly the R&D also ought to follow the patient". However Professor Pearson went on to admit that this is "not an easy issue"; she cited the cost and complexity of research liaison, and the underdeveloped state of research capacity in general practice, nursing and the professions allied to medicine (see Appendix 10).

4.16 We agree that research can follow the patient, but only up to a point. Multi-centre trials are a familiar research tool, and can no doubt be taken further, particularly with the assistance of information technology. Clinical teaching is making more use than hitherto of peripheral hospitals and the primary sector, and research opportunities in such settings will no doubt expand. However this will not happen overnight; and, even in the long term, we believe that there will always be a need both for specialist centres for rare and problematic conditions, and for major centres for more common ones.

4.17 These are two different problems, requiring different approaches. In the case of rare conditions, it will often be the case that referral to a specialist centre is demonstrably in the patient's best interests from a purely clinical point of view. **Where such referrals appear to be falling off, we recommend that the specialist centre should advertise its superior outcome measures through professional channels.**

4.18 However it is not always the case that the clinical benefit of specialist treatment is clearly established in outcome measures. Research may be at an early stage; the benefit to the patient may consist of better understanding of the disease in the long term, rather than short-term cure. Or the benefit may consist of early diagnosis or even prevention, so that outcome comparisons with treatment in other settings will never be made. Even when the outcome measures are favourable and widely known, the medical network and "patient power" may not be sufficient to convince purchasers of the importance of such referrals.

4.19 The case of major clinics for common or less serious conditions is even more difficult. Such clinics can be of great importance to teaching and research, which will benefit all patients in the long term; but this may carry no weight with a purchaser when referral cannot be shown to be in the immediate interest of a particular patient from a purely clinical point of view. Even if the academic centre is able to set a price for the treatment in question which is no higher than that of the district general hospital, the patient may still prefer to be treated closer to home.

4.20 **We recommend that academic centres should be permitted to use facilities funds for teaching or research to set competitive prices in order to attract referrals which, while not of proven clinical benefit, are important from the point of view of research or teaching. Additional regional funds should be retained and deployed, by the RDRD on application from an academic centre, to preserve patient flows important to teaching and research against short-term market fluctuations. We further recommend that academic centres, assisted by RDRDs, should take positive steps to educate purchasers, and particularly managers and lay members of Health Authorities, as to the importance of research to developments in patient care, and the importance of patient flows to research.**

4.21 The Culyer report implementation plan announces an NHS Working Party on Patients Flows. We commend the above recommendations, and the evidence on which they are based, to that group.

Rationalisation of urban hospitals

4.22 The shift of clinical services into the primary sector and the community is being accompanied by rationalisation of hospitals in the big cities. This phenomenon is not unique to London or to the United Kingdom; it is facing big city hospitals across the developed world. None of our witnesses denies that this is a necessary process; some rightly see it as offering great opportunities, as well as formidable challenges (eg Dr Green p213). But in some places the process seems to be being managed badly, to the detriment of research.

4.23 First, when a teaching hospital moves, the medical school may have to move with it, at enormous cost. Even realignment without relocation may impose significant short-term costs: merging the British Postgraduate Medical Federation (BPMF) Institutes with multi-faculty colleges is costing sums in six figures (Q630), which the institutions are having to find for themselves. Secondly, outside London, rationalisation is taking place in an unplanned way in response to the actions of individual purchasers and providers, producing in some cases arrangements which make no sense from the point of view of teaching and research (CDMS p78, MRC p69; SCOPME p471; AYMS p319). In London the process has been managed by the London Implementation Group within the Department of Health; but the Group is now disbanded, and "it is not clear that the Regions have the resources to manage these complex changes effectively. This problem may be enhanced from April 1996, when the new downsized regional offices come into play" (Dr Green p213). Particularly in London, but also in the major provincial centres, the process is engendering a high level of uncertainty, with consequences for recruitment and retention, morale, continuity of long-term research programmes, and investment by outside interests including charities.

4.24 Professor Christopher Edwards claims (Q151) that, through close liaison and joint planning over several years, Edinburgh has avoided many of the problems which are being experienced in London. Even in this case, funding the academic part of the development is causing problems (Q1026). The Scottish Office observe (p317) that Scotland is small, the "key players" in Lothian Region know each other well, and health and education are both responsibilities of the same Government Minister - an advantage to Scottish academic medicine which English academics envy. They comment, "Experience so far would attest to the importance of regular contact between the relevant agencies...and of the close involvement of government".

4.25 In Glasgow, on the other hand, the Health Board is proposing to move all acute clinical services from the Western Hospital, adjacent to the University, two miles away to Gartnavel General Hospital: "There is at present considerable concern amongst the clinical academic community that geographic separation from basic scientists with whom they work closely...would be deleterious to ongoing curiosity-driven research" (RSE p314). In the cases of both Edinburgh and Glasgow, the involvement of private finance, under the Government's Private Finance Initiative, may increase the cost to the university (Q1026, HEFCs Q1353). For England, the Council of Deans (p78) cites examples of successful joint planning from Birmingham (cancer), Leicester (cardiovascular science), Liverpool (clinical pharmacology), Nottingham (imaging) and Manchester (diabetes), and examples of unsatisfactory outcomes from Birmingham (Children's Hospitals), Manchester (neuroscience) and Trent (cardiac surgery). Rationalisation is also taking place in Belfast (p223), but the net effect on research is not yet apparent.

4.26 The Committee of Vice-Chancellors and Principals (CVCP) see a problem of co-ordination of purchasers' local decisions with national strategies for education and research (p87; Q157). They consider that the principle of joint planning, which underlay the "Ten Key Principles" developed by SGUMDER in 1990 (see Box 11), is coming under increasing strain as authority within the NHS is devolved ever lower. To make joint planning possible in the new situation, they call for universities to have representation at every level of the NHS, including a voice in the appointment of Regional Directors of R&D and senior officers of Trusts, and for the strategic role of Regional Health Authorities to be maintained when the RHAs are abolished (Q163). Looking to the future, some of our witnesses see the process of devolution going even further, giving more and more power to GP fundholders with even less interest in the impact of their purchasing decisions on the academic infrastructure. This "is unlikely to promote an atmosphere in which research will flourish" (ARC p413; cp members of the Task Force Q530), but rather one in which "sensible central planning becomes very much more difficult to organise" (Q1028).

4.27 The National Health Service and Community Care Act 1990 provided that at least one of the persons appointed to each RHA by the Secretary of State "must hold a post in a university with a medical or dental school" (paragraph 1 of Schedule 1); that, in the case of prescribed DHAs (ie DHAs with a teaching hospital), at least one of the persons appointed to the DHA by the RHA must hold such a post (paragraph 2); and that, where an NHS Trust "is to be regarded as having a significant teaching commitment", the order establishing the Trust is to include "a provision to secure the inclusion in the non-executive directors... of a person appointed from a university with a medical or dental school specified in the order" (paragraph 3 of Schedule 2).

4.28 The first two of these provisions were inserted by amendment in the House of Lords, following extensive debate (*Hansard* 7 June 1990 col. 1535). Section 5(1) of the Health Authorities Act 1995 revokes them, and makes no corresponding provision in relation to the new unitary Health Authorities or the regional offices of the NHS Executive. Lady Cumberlege told the House on Second Reading (*Hansard* 6 March 1995 cols 14, 71), "Regulations will require that health authorities whose area contains a medical or dental school shall have a university non-executive member...The regional offices will be very different from the old RHAs...so it would not

BOX 11: TEN KEY PRINCIPLES

"Whatever organisational arrangements are agreed locally, *the Group recommends that both the universities and the NHS should be guided by ten key principles:*

(i) the aim of undergraduate medical and dental education is to produce doctors and dentists who are able to meet the present and future needs of the health services; to this end, future doctors and dentists should be educated in an atmosphere which combines high professional standards (set by the GMC/GDC) with a spirit of intellectual enquiry and innovation based on active research and development programmes;

(ii) the universities and the NHS have a shared responsibility for undergraduate medical and dental education;

(iii) undergraduate medical and dental education should be provided efficiently and cost-effectively within the programmes of the universities and the NHS;

(iv) the local provision of undergraduate medical and dental education should be guided by clearly defined and co-ordinated national policies;

(v) local policies and plans relevant to undergraduate medical and dental education should be agreed and regularly reviewed by both parties; once established, local policies and plans should be disseminated;

(vi) the planning and review process for undergraduate medical and dental education should involve senior staff in universities and the NHS, and other relevant bodies;

(vii) information required for the formulation of plans and reviews should be shared by both sides;

(viii) in their plans the universities and the NHS should take into account the implications of research for teaching and service provision, and should foster both the application of current research and the development of high quality new projects;

(ix) the universities and the NHS should consult each other on the nature and special interest of senior medical appointments;

(x) SIFT (or ACT in Scotland) should be allocated on the basis of jointly agreed service plans to support teaching and research.

These principles have been endorsed by the Secretaries of State for Health, for Education and Science and for Scotland and have been promulgated to the NHS and to the universities."

Source: SGUMDER 2nd Report, June 1990

be appropriate to have a university representative within the regional office. However, my right honourable friend the Secretary of State has asked the regional policy board members in each region to take a particular responsibility for building links between the universities and the NHS".

4.29 The Department of Health considers that the Ten Key Principles are still in force (p365), though they admit the possibility that they might require revision (p367). With regard to NHS capital schemes which might require university accommodation to be relocated, the Department of Health agreed with the Department for Education in 1993 that the NHS must keep the university informed from an early stage, and must include costs and benefits for education and research in the formal appraisal of the proposed investment; and that "any costs falling upon the university should ordinarily be proportionate to the education and research benefits which will accrue" (p366). On this basis, the Department believes that any situation can be resolved amicably; but they know of no case where the NHS has in fact explicitly paid for new university accommodation. "As a recognition of the continued anxiety from the university sector, the Department [of Health] is working with the Department for Education, the Higher Education Funding Council for England (HEFCE) and the CVCP to clarify the position and draw up explicit guidance".

4.30 The anxiety of the university sector is apparent from the HEFCs' account of the same story (p395, Q1350). The agreement in 1993 failed to solve the problem, because the requirement to keep universities informed was in some cases disregarded, and because of the difficulty of assessing "education and research benefits". In March, new guidance was "in the final stages of agreement". In the mean time, the HEFCs will not make capital provision for moves driven by the NHS (CDMS pp75, 78; MRC p46; CVCP p87, QQ173-6; Dr Green p213).

4.31 This is a depressing story of Whitehall at its worst, and of the failure of two Departments to act together for the common good. The argument is not over whether urban hospital services require rationalisation, nor over what are the consequences for the medical schools, but merely over which Department should take responsibility for those consequences. The agreement of the Ten Key Principles was an important step, but the Principles have not been converted into practice. In some of the cases referred to above the situation has been saved by far-sighted management at local level; in other cases such management appears to have been lacking, and the cost and other consequences have been left to lie where they fell, on the universities and medical schools, and therefore on the future of medicine in the UK.

4.32 We welcome the news that fresh guidance is being drawn up. It is already too late for some medical schools, which have lost key staff as a result of uncertainty and funding difficulties. **The new guidance must enforce joint planning procedures**; in the absence of RHAs, a strategic role might fall to the RDRD, the Postgraduate Deans and/or the new Regional Education and Development Groups. **The guidance must make it clear that, in some cases of hospital rationalisation, moving the medical school will not produce "education and research benefits" beyond the mere restoration of the *status quo ante*, and that in those cases the NHS will either foot the bill or change the plan. Even where education and research benefits are identified, resources must still be identified to pay for them; if neither the university nor the HEFC is able or willing to find such resources straight away, then either the NHS must foot the bill or the project must be delayed or shelved**. It must be explicitly recognised that for the university to be forced by the NHS to bear capital costs which are none of its making from recurrent or external income is not an acceptable outcome.

4.33 It might be argued that the failure of the statutory university representatives on the RHAs concerned to prevent these situations from arising justifies the Government's decision not to preserve their position vis-à-vis the new regional offices. We hold the contrary view: abolishing this tier of representation will make such situations more likely to occur in future. **We recommend that a formal mechanism be devised to enable university representatives to be involved in planning and decision-making at regional level where research and teaching interests are at stake. This could be best achieved by establishing Policy and Strategy Planning Committees in each Region, chaired by Regional Chairmen, including within their membership the Postgraduate Dean, the RDRD, the Regional Director of Public Health, and nominees of relevant universities.** We welcome the Minister's assurance on Report stage of the Health Authorities Bill (Lords *Hansard* 24th April 1995 col. 751) that "There is nothing to stop regional chairmen within their regions building any mechanisms they wish in order to strengthen those links [with universities]".

Intellectual property

4.34 We have seen various NHS research contracts, including one for a major research unit and one for a former Special Health Authority hospital, which provide for the NHS to retain all intellectual property rights and to be informed of all findings before publication.

4.35 Dr Malcolm Green comments, "The requirement for notification of communications before dissemination is impractical and inappropriate (p212); "Research has to be fostered in a spirit of international freedom of intellectual endeavour" (Q626). Professor Robert Boyd (Q547) notes that NHS service support is to be put on a contractual basis following the Culyer report; it would be a "retrogressive step" if such clauses were included in service support contracts.

4.36 The Institution of Mechanical Engineering (p450) calls for the policy behind these provisions to be revised. They leave the research team with no incentive to go for exploitation; the NHS is not well set up to exploit IPR itself; and meanwhile the provisions for potentially indefinite delay and for exclusive retention of IPR mean that NHS R&D is classed unfavourably as contract research for the purposes of the HEFCs' funding formulae, instead of generic research counting towards "QR". The Institution commends to the NHS the more liberal policies of the Research Councils, or the more informed attitude of the DTI.

4.37 Dr Doyle of Zeneca explained to us the line taken by industrial sponsors of research (Q821). "We are obviously keen to see publication and it is part of the agreements we strike with clinicians, an understanding that there will be a publication and that we will have the right to see what is published before it is published. In general we try to contrive a clear understanding that the publication will reflect the objectives of the study. There is always a discomfort if individuals go off down the track and do sub-analysis which may distract from the main message that is coming out of the clinical study". Professor Swales (Q864) considers that this sort of "delay clause" is reasonable; but indefinite delay "would go against everything that the academic community believes". Professor Trimble of Belfast (Q697) points out that any unnecessary delay increases the risk that the research will be published elsewhere first. Professor Edwards (Q1034), a Trustee of the Wellcome Trust, points out that no charitable trust could legally submit to such a restriction.

4.38 The Department of Health has shown us the relevant standard clauses from their R&D contracts, and defends them (p358). They provide that "details of research are normally published", and that the prior consent of the Secretary of State "shall not be unreasonably withheld". "In practice the Department has not withheld permission to publish any work covered by this contract. Publication and dissemination is encouraged, and the Department supports dissemination activities at the end of most projects". The ex-SHA contracts provide for the Trust Director to have "formal oversight" of research findings: this is intended to give the Trust Director a filtering role, so that only "matters of potential medical importance and/or public health sensitivity" need be forwarded to the Department for approval; how detailed this oversight should be is a matter for local discretion.

4.39 A letter from the Department to a particular research unit in 1989 indicates reasons for which permission to publish commissioned research might be withheld: to assure "the integrity and protection of Crown ownership in the research"; to preserve confidentiality; or to preserve the Crown from legal suit or disrepute. The letter declares, "The facts brought to light by the research would not of themselves be grounds for withholding consent to publication".

4.40 These are none of them legitimate reasons for withholding permission to publish. Ownership of the research seldom rests solely in the Crown and in many cases not at all. There are never any grounds for confidentiality; any confidentiality about patients is the concern of the author and the publisher. Should the research show that the Crown has been negligent or otherwise at fault it *should* be subject to both legal suit and disrepute. The Department's assurances are welcome; but they are at variance with the plain meaning of their standard contract terms, which place researchers working for the NHS in a more restricted position than researchers under contract to a pharmaceutical company. This appears to be a case where the desire to foster NHS R&D in order to build a knowledge-based service has run up against the tendency of the market mechanism to force every relationship onto a contractual basis.

4.41 In this case, the form of contract chosen is clearly inappropriate, and contrary to the interests of the health service. **We recommend that the Department of Health should impose no restriction on the right to publish, other than notification of the intention to publish two weeks before submission of the paper for publication. No restrictive provisions must be included in contracts for NHS service support for work funded by other bodies.**

4.42 The Conference of Medical Royal Colleges (CMRC) has drawn our attention to a related issue: conflict between academic openness, and a tendency for Trusts to seek quasi-commercial confidentiality (QQ907-910). They offered two examples: one concerned audit protocols, and the other the outcomes of cardio-thoracic surgery. Both situations were resolved, but only after disagreement and delay.

Careers in clinical research

4.43 Recruitment and retention in clinical academic medicine are a general problem, which goes wider than the NHS R&D Strategy and beyond the terms of reference of the Culyer report (CDMS pp72, 74, 79, QQ144-7; CVCP p87, QQ170-171; BMA p406). The scale of the problem varies between disciplines; the worst effects are being felt in surgery, anaesthesia, paediatrics, geriatrics, obstetrics, orthopaedics and pathology. In these areas, recruits to academic posts are few in number and sometimes - often, according to the Royal Society of Edinburgh (p315) - of less than the highest quality. There seem to be two main reasons for the problem: disparity of reward between academic and non-academic medicine (see Appendix 5); and uncertainty and insecurity in academic medicine engendered by the impact of NHS-driven reforms (including the rationalisation of urban hospitals - see above).

4.44 Professor Swales sees this problem from two angles, as a medical Dean and from his work for the British Heart Foundation. He reports (Q838) that, while many enthusiastic young people want to enter academic medicine, not enough of the best of them stay on the academic track. "Anecdotally, senior lecturer posts are particularly difficult to fill, even in the more attractive fields of medical research". The BHF has funds to appoint two or three new professors of cardiology per year; they appointed one in 1993 and another in 1994, and in February 1995 had had only one application.

4.45 Sir Leslie Turnberg (Q886) makes a distinction between the medical disciplines, and other disciplines such as anaesthetics, orthopaedics, psychiatry and radiology. In the former, there is a shortage of career-grade academic posts (senior lecturer and above). In the latter, "there is a failure of people to go into these academic disciplines because of the attractions of rapidly going through the system into a consultant's post and perhaps undue accentuation of the need to pass exams at the end of it all; so the training programmes will, in some instances, provide disincentives to those who might go into academic careers". For the former, he suggests that the MRC and the major charities might help by funding more career-grade posts (Q888); for the latter, he suggests "reducing the rigidity of the programmes to encourage people to enter the academic ladder".

4.46 For those doctors who still choose an academic career, the demands of service provision, administration and teaching are rising, taking more and more time from research itself (HEFCs Q1358). Professor Alberti tells us (Q1290) that, in respect of full-time academic staff, "trying to maintain six sessions a week only [of NHS service] is proving most difficult". According to the Royal Society of Edinburgh (pp285, 315, Q1070), "The volume of paperwork and administration which is being required of senior academics creates an image of clinical academic activity which is not desirable". AYMS (p319) calls for senior academics to have protected research time, and for this to be monitored locally to prevent undue pressure for more clinical service. The HEFCs offer Job's comfort by observing (Q1370) that the Deans of medical schools are no more over-burdened with administration than other heads of departments.

4.47 Dr Doyle reports widespread concern in the pharmaceutical industry over the number and quality of clinical researchers (QQ823, 829). The best clinicians are "reluctant to step off the ladder of advancement" to seek a research fellowship from the MRC or the Wellcome Trust. The doubly-qualified "MD-PhD" is much less common in the UK than in the USA. He suspects that the problem is not lack of interest or opportunity, but the "signals" given out by bodies such as the Royal Colleges. He admits that his evidence is anecdotal.

4.48 Professor John Swales comments (p253), "The difficulty in developing an adequate career structure for clinical scientists has been endlessly discussed over the past decade or two without satisfactory resolution. Partly this reflects the difficulty in reconciling a specialist career structure in medicine with equally specialist training in science. The tensions here are continuing to grow". He draws a distinction between two forms of science, with different needs: laboratory-based biomedical science, and applied clinical research. The former typically requires a critical mass of scientists, concentrated in a specialist centre and protected from demands for clinical service; "the failure of the NHS and colleges to provide adequately for the needs of such individuals is a source of concern". The latter, on the other hand, calls for "a large body of adequately trained, well motivated clinical scientists who are at the front of their specialty as well as dedicated to the pursuit of science. The numbers have to be large and it is undesirable to concentrate them in a few select centres, although clearly leadership may need to be more focused". In oral evidence (Q839), he drew a different distinction, between "the professional academics" and the wider clinical community. For the former, "Their career structure...is a very uncertain one and the attractions of moving on to NHS practice or private practice are very great". The latter is of increasing importance to research as biomedical science advances "from the relatively straightforward monogenic (single gene) disorders to the large causes of morbidity and mortality like heart disease and cancer", and as health services research expands; "we also have to ensure that the broader community of people working within the health service do not have substantial obstacles to their continuing involvement in research".

4.49 Professor Peckham and our witnesses from the MRC both described their various initiatives to create career prospects for clinical researchers (QQ38, 63-71, MRC p65). AYMS acknowledges that the number of fellowships is increasing, and calls for a corresponding increase in senior academic posts: "The failure of expansion at this level will generate a cohort of highly-trained clinical researchers who are unsuitable for purely service posts with the resultant waste of years of training".

4.50 Dr David Gordon of the Wellcome Trust pointed to one helpful development: the increasing fluidity of the boundaries between different disciplines and departments; but he considers that the UK offers less scope than some other countries for doctors to move between research, teaching and clinical practice as their interests and opportunities evolve. Our evidence on this issue points different ways: according to the RSE (p314), "The divide between NHS-paid clinicians and university-paid clinical academics is becoming much wider that it has been in the past, and...this is likely to be deleterious to both parties"; according to AYMS (p319), "The recognition of two distinct career tracks will underpin the success of UK medical research".

4.51 The position of the clinically qualified academic is currently afflicted by additional uncertainty from four directions:

(i) *NHS-funded posts* The NHS currently funds around 600 clinical academic posts. The degree of dependence on the NHS varies from medical school to medical school, but in some schools more than half the staff are supported in this way. The Department of Health assures us that funds will continue to be available for this purpose after the abolition of the RHAs in 1996, and we welcome this assurance. However it is not clear how far they can influence the decisions of individual hospital trusts; and even if existing posts are safe, it is not clear by what process and at what level the NHS will be able to support the creation of new posts. See Appendix 5 paragraphs 56-64.

(ii) *Unified training grade* To comply with EU legislation, and following the Calman report, specialist training for hospital doctors is to be made shorter and more structured, with both direct and indirect effects on research. First, junior doctors may be discouraged from undertaking research training during their period of specialist training. We are assured that the new system of National Training Numbers (NTNs) to be introduced for purposes of manpower planning will be sufficiently flexible to allow a trainee to take time out from structured training to do research without penalty either to himself or to his "home" hospital. This assurance is important, and we welcome it; but even so, research training which formerly could be interwoven with higher specialist training will now incur an explicit time penalty of 2-3 years, which may be enough to put off many potential PhDs. Secondly, shorter training will mean fewer junior doctors, with even less time for clinical service than the reduced hours provided for by the "New Deal"; more of the burden of service will have to fall to consultants, including academic consultants, whose research time will be further squeezed. The NHS proposes to increase the number of consultant posts to accommodate the accelerated output of junior doctors; since the HEFCs have no plans to fund a comparable increase in senior lecturer posts, the important influence of academic honorary consultants over the culture of the university hospital and the wider NHS will be diluted. See Appendix 5 paragraphs 14-27.

(iii) *Distinction Awards* Following the Kendell report, the conferring of the lowest (C) grade of medical and dental consultant's Distinction Award is likely to be delegated to some extent to the local employer. Honorary academic consultants will continue to be eligible for these awards; but it is not clear how far employers will have regard to national academic distinction, by comparison with local service contribution, nor how easy it will be for a distinguished academic consultant to "leapfrog" the local award and move directly to a national B award. See Appendix 5 paragraphs 39-55.

(iv) *Parity of pay* Clinical academic salaries have been linked to NHS salaries for many years. The NHS is now moving in the direction of local pay, negotiated Trust by Trust; how parity of academic pay can be maintained in this situation is not clear. See Appendix 5 paragraphs 34-38.

4.52 Faced with all these additional uncertainties, the bright young doctor who might have considered an academic career can hardly be blamed for preferring the relatively short, straight path to a consultant's post - with the possibility of private practice. The evidence cited above suggests that this is already a serious problem, which the matters noted in the previous paragraph are likely to exacerbate. This bodes ill for the future of clinical teaching and research, and therefore for the future of medicine. It may even threaten clinical services in the short term, if it is the case that, as reported by our witnesses, clinically qualified academics tend to put in more than their contracted NHS sessions. **We consider that the disincentives to a clinical academic career are now so great as to warrant an immediate enquiry in their own right**. This task should be entrusted either to an independent Task Force chaired by a respected clinical academic, or to a sub-group of SGUMDER. We put this proposal to the BMA, and they welcomed it (Q1373). In our view this issue deserves urgent attention.

United Kingdom

4.53 UK medical research is a national and indeed international enterprise, and the major funders of research - the MRC, the big charities and the pharmaceutical companies - operate across internal frontiers. Yet health services are administered separately for England, Scotland, Wales and Northern Ireland; and, as they become more actively involved in research management through the operation of the English NHS R&D Strategy, the implementation of the Culyer report, and analogous developments in the other home countries, the danger grows that the national research effort will be hampered and fragmented. It is unsatisfactory that, at this critical time, neither Wales nor Northern Ireland has a Director of R&D in post (see Appendices 11-13). **We recommend that these posts be filled as soon as possible; that structures and strategies for R&D management by the health services should as far as possible be compatible in all four home countries; and that the principle of cross-representation should be applied to all key committees.**

CHAPTER 5 SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

A time of opportunity

5.1 Our evidence leads us to conclude that this is an exciting time to be a researcher working in or with the NHS. Biomedical science is advancing rapidly; health services research is also making great strides, stimulated by the NHS R&D Strategy and the drive towards a knowledge-based service delivering better and more cost-effective health care; research is expanding out of the university hospital to involve new settings, in primary care and the community, and professional groups not previously much involved in R&D; and all these developments are taking place in the context of political commitment to increase the NHS's expenditure on R&D to 1.5 per cent of the total budget, and an anticipated increase in the charitable resources of the Wellcome Trust.

5.2 The recommendations in this report are all intended to maximise the benefits of these opportunities to the NHS and to the health of the nation, and to point to aspects of Government policy which might, albeit unintentionally, stand in the way of those benefits. Subject to the Government's response to this report, we reserve the right to review the implementation of the Culyer report in a year or two.

NHS R&D Strategy

5.3 We warmly congratulate Professor Peckham on the success of the NHS R&D Strategy so far. Likewise we congratulate the first generation of RDRDs, who have succeeded in making the Strategy a reality at "field" level; and we commend the personal commitment of the Secretary of State for Health, who has backed the Strategy with political will and real shifts of resources (paragraph 2.2).

5.4 We recommend that, at the next revision of the Concordat, the relationship between the missions of the MRC and the NHS R&D Strategy should be clarified (paragraph 2.7).

5.5 We recommend that the DRD and the RDRDs should continue to be drawn from the higher levels of the research community; that the universities (including those with no medical school but with an established record of strength in other health-related disciplines) should be formally involved in their appointment; and that the RDRDs should have the assistance of Associate Directors, enabling them to retain a footing in research and/or clinical work (paragraph 2.9).

5.6 We recommend that the new central R&D plan should involve a good measure of devolved responsibility, permitting each RDRD to take independent action within the Region, including where appropriate identifying and funding regional priority programmes and exploiting and fostering local research talent (paragraph 2.10).

5.7 We welcome Professor Peckham's assurance that responsive funding at regional level will continue. Peer review should continue to apply; criteria of relevance should not be unduly restrictive; and biomedical projects must not be arbitrarily excluded (paragraph 2.12).

5.8 We encourage the new RDRDs to retain networking, especially in relation to health services research and research in primary care, and research involving non-medical scientists and the professions allied to medicine, as one of their top priorities. We recommend that a mechanism be established through which researchers from all disciplines can meet managers at local level at every possible opportunity, to discuss needs, opportunities and conflicts of interest (paragraph 2.14).

5.9 We welcome the Government's assurances that the universities will be represented on Health Authority Boards. We recommend that some means be found to connect the research community with GP fundholders and to educate them as to the impact of their purchasing decisions on research, since their role as purchasers is of growing significance (paragraph 2.15).

5.10 We approve of the steps taken so far in the areas of dissemination and implementation (paragraph 2.16), and in particular we welcome the foundation of the Cochrane and York Centres (paragraph 2.17). There is an obvious need for the outputs of the R&D Strategy to be taken into account by those responsible for the content of continuing professional education and training, but Effective Health Care Bulletins are no substitute for continuing education (paragraph 2.18). We commend the CRDC's initiative in setting up an Advisory Group on implementation, with a view to commissioning research in this area (paragraph 2.19).

5.11 For purchasers' contracts and providers' protocols to be based on critical appraisal of the latest research can only be good for the health service. However, the informed and innovative practitioner must remain free to override "evidence" if it is either incomplete in the context of the case, or out of date; moreover, clinical researchers are constantly enlarging the frontiers of knowledge, and must not be held back rigidly within the boundaries of what is known at a particular time (paragraph 2.20).

The Culyer report

5.12 We commend the Government for acknowledging the problems posed for research by the NHS internal market by setting up a Task Force; and we warmly congratulate Professor Culyer and his team for producing, against a very tight deadline, a set of principles which command general assent. It is now up to the research community and the NHS to translate these principles into procedures which will safeguard and foster UK medical research, for the benefit of health and health services in the future (paragraph 3.3). We welcome the creation of a compulsory levy on all purchasers' allocations to furnish the NHS R&D Budget (paragraph 3.5).

5.13 We welcome the creation of a stream of "research facilities funding" to support the additional infrastructure needed in NHS settings which support clinical research to a significant extent (paragraph 3.6). The CRDC must resist the temptation progressively to shift the balance away from essential core funding in favour of project funding (paragraph 3.7).

5.14 The degree of selectivity in the allocation of research facilities funds among the major university hospitals should be relatively limited, and all such hospitals should be guaranteed a level of core funding from the R&D budget, on the basis of assessment, sufficient to sustain research activity into the longer term. This provision should also apply to the former Special Health Authority hospitals in London (paragraph 3.10).

5.15 The assessment exercise which will inform research facilities funding must be integrated with the HEFCs' Research Assessment Exercise (RAE) (paragraph 3.11).

5.16 Pre-protocol, curiosity-driven research is not an indulgence or an optional extra; it is how many revolutionary research ideas begin (paragraph 3.13). We welcome assurances from NAHAT that purchasers accept that "an enquiring, questioning approach is an essential element of the good clinical practice being purchased", and that low-cost or no-cost research activities are not to be accounted for (paragraph 3.14). Pre-protocol research activities the costs of which are non-trivial, and cannot reasonably be charged to purchasers, should be supported from the R&D levy; and an allowance for curiosity-driven research should be built in to all NHS R&D project, programme and service support funding, as an increment of a few per cent on each allocation over and above the identified need (paragraph 3.15).

5.17 Within the overall NHS R&D Strategy, we look forward to the NHS research capacity strategy, which will direct resources to research training in the important, developing and under-resourced disciplines of general practice, nursing and the professions allied to medicine. In this context, a distinct stream of funds should be identified within the R&D levy, to underpin research in primary care, general practice and community settings. Research facilities funding as conceived by the Culyer report should be confined to supporting hospital-based and relevant university-based research. The new stream should be devolved for more discriminating distribution to the RDRDs, who should have discretion to distribute it in ways appropriate to local strengths and needs, in the form of GP research practice grants, support for research sessions for GPs, non-medical scientists, nurses, midwives, health visitors and other health care professionals, capital grant or any other appropriate mode of funding (paragraph 3.18).

5.18 We welcome the interim arrangements recently announced for provision of NHS service support for clinical research, and the proposal to make service support funding available from the R&D levy (paragraph 3.19). The requirement for signing-off by the NHS provider should be imposed not at the time of application, but only once an award has been offered, before final acceptance by the host university or hospital department; and it should not be imposed at all on awards from the MRC (paragraph 3.20).

5.19 Both the needs-led and the science-led approaches are important to the NHS. We trust that the CRDC will recognise the dangers inherent in over-direction. They must exercise control over service support funding for investigator-led research with a very light hand, refusing it only in exceptional circumstances (paragraph 3.21). The MRC should continue to have first call on NHS resources for service support, subject to the Concordat (paragraph 3.22). Arrangements for NHS service support for research funded by the MRC and other bodies should be compatible throughout the UK (paragraph 3.23).

5.20 The new system for allocating the service increment for teaching must be simple, and must conform to a high degree to the system for allocating research facilities funding (paragraph 3.25). Unless research facilities funds and teaching funds are to flow down all-but-parallel channels, the ratio between them will require to be put right before disaggregation takes effect (paragraph 3.26).

5.21 The excess cost of innovative services not yet adopted across the NHS should, for no more than two years, be a legitimate call either on the provider's research facilities funding, or on a separate regional reserve allocated to the purchaser (paragraph 3.29).

5.22 The baseline for the R&D levy should receive a permanent uprating of 5 per cent to allow for transaction costs (paragraph 3.32).

5.23 As originally envisaged in *Research for Health*, the target of spending 1.5 per cent of the total NHS budget on R&D should be met in 1995-96 (paragraph 3.37).

Patient flows and concentrations

5.24 Where referrals for rare conditions appear to be falling off, and referral is demonstrably in the patient's best interests from a purely clinical point of view, the specialist centre should advertise its superior outcome measures through professional channels (paragraph 4.17).

5.25 Academic centres should be permitted to use facilities funds for teaching or research to set competitive prices in order to attract referrals which, while not of proven clinical benefit, are important from the point of view of research or teaching. Additional regional funds should be retained and deployed, by the RDRD on application from an academic centre, to preserve patient flows important to teaching and research against short-term market fluctuations. Academic centres, assisted by RDRDs, should take positive steps to educate purchasers, and particularly managers and lay members of Health Authorities, as to the importance of research to developments in patient care and the importance of patient flows to research (paragraph 4.20).

Rationalisation of urban hospitals

5.26 The new NHS-DFE guidance concerning rationalisation of urban hospitals must enforce joint planning procedures. It must make it clear that, in some cases of hospital rationalisation, moving an associated medical school will not produce "education and research benefits" beyond the mere restoration of the *status quo ante*, and that in those cases the NHS will either foot the bill or change the plan. Even where education and research benefits are identified, resources must still be identified to pay for them; if neither the university nor the HEFC is able or willing to find such resources straight away, then either the NHS must foot the bill or the project must be delayed or shelved (paragraph 4.32).

5.27 A formal mechanism should be devised to enable university representatives to be involved in planning and decision-making at regional level where research and teaching interests are at stake. This could be best achieved by establishing Policy and Strategy Planning Committees in each Region, chaired by Regional Chairmen, including within their membership the Postgraduate Dean, the RDRD, the Regional Director of Public Health, and nominees of relevant universities (paragraph 4.33).

Intellectual property

5.28 The Department of Health should impose no restrictions on the right to publish research supported by the NHS other than notification of the intention to publish two weeks before submission of the paper for publication. No "gagging" provisions must be included in contracts for NHS service support for work funded by other bodies (paragraph 4.41).

Clinical academic careers

5.29 We note the combined effect on clinically qualified academics of uncertainty engendered by the NHS reforms (including the problems noted above in relation to referrals, hospital rationalisation, local pay and the continuing capacity of the NHS to fund academic posts); the shortage of career-grade academic posts; the increasing loads of service provision, administration and teaching; the consequences of the unified training grade; and the proposed changes to the system of Distinction Awards. We consider that the disincentives to a clinical academic career are now so great as to warrant an immediate enquiry in their own right (paragraph 4.52).

United Kingdom

5.30 The posts of Director of R&D for the health services in Wales and Northern Ireland must be filled as soon as possible. Structures and strategies for R&D management by the health services should as far as possible be compatible in all four home countries; and the principle of cross-representation should be applied to all key committees (paragraph 4.53).

APPENDIX 1

Sub-Committee I: Medical Research and the NHS Reforms

The members of Sub-Committee I were:

L. Butterfield (co-opted)
L. Flowers
L. Gregson
B. Jay of Paddington (co-opted; stood down)
B. McFarlane of Llandaff (co-opted)
L. Nathan
L. Nelson of Stafford (co-opted; stood down)
B. Perry of Southwark
L. Perry of Walton
E. Selborne
L. Walton of Detchant (Chairman)

The Sub-Committee appointed as their Specialist Adviser Professor Sir Keith Peters FRS, Regius Professor of Physic, University of Cambridge.

APPENDIX 2

List of Witnesses

Those marked * gave oral evidence.

* Professor George Alberti, RDRD, Northern and Yorkshire Region
* Professor Ingrid V Allen, Member of the NHS R&D Task Force
Arthritis and Rheumatism Council
Association of British HealthCare Industries
Association of the British Pharmaceutical Industry
* Association of Medical Research Charities
Association of University Departments of General Practice
* Association of Young Medical Scientists
* Professor R D H Boyd, Member of the NHS R&D Task Force
Professor Alasdair Breckenridge, RDRD, North West Region
British Dental Association
* British Medical Association
Professor D J H Brock, University of Edinburgh
Central Manchester Healthcare NHS Trust
* Dr Iain Chalmers, Director, UK Cochrane Centre
* Committee of Scottish Higher Education Principals
* Committee of Vice Chancellors and Principals
* Conference of Medical Royal Colleges
* Council of Deans of Medical Schools
* Council of Deans of Dental Schools
* Council for Professions Supplementary to Medicine
Council of Science and Technology Institutes
* Professor A J Culyer, Chairman of the NHS R&D Task Force
* Department of Health
* Dr Peter Doyle, Zeneca Ltd
Engineering and Physical Sciences Research Council
* Dr Malcolm Green, Director, British Postgraduate Medical Federation
* Professor Andrew Haines, RDRD, North Thames Region
Heads of University Centres of Biomedical Science
Higher Education Funding Council for England
* Professor Stephen Holgate, NHS Director of Trials
Professor R A C Hughes, Guy's and St Thomas' UMDS
Institute of Biomedical Science
Institute of Physical Sciences in Medicine
Institution of Mechanical Engineering
* Professor Sir Miles Irving, Chairman of the Standing Group on Health Technology
* Mr John H James, Member of the NHS R&D Task Force
Professor N W Johnson, King's College London
Leukaemia Research Fund
Lewis-Emerton Associates
Medical Journalists' Association
* Medical Research Council
* National Association of Health Authorities and Trusts
* NHS Executive
* Northern Ireland Department of Health and Social Services
Office of Science and Technology
* Professor Maggie Pearson, Member of the NHS R&D Task Force
* Professor M J Peckham, Director of Research and Development, Department of Health
* Queen's University of Belfast
Professor Jane Robinson, University of Nottingham
Royal Academy of Engineering
* Royal College of General Practitioners
Royal College of Midwives
* Royal College of Nursing
Royal Society
* Royal Society of Edinburgh

* Scottish Higher Education Funding Council
Scottish Hospital Endowments Research Trust
* Scottish Office Home and Health Department
* Mr Trevor Sheldon, Director, NHS Centre for Reviews and Dissemination, York
Society for Research in Rehabilitation
South Sefton Research Ethics Committee
Standing Committee on Postgraduate Medical and Dental Education
* Professor J D Swales, University of Leicester
Professor E J Thomas, University of Southampton
Professor S Tomlinson, Dean, Faculty of Medicine, University of Manchester, and colleagues
United Medical and Dental Schools of Guy's and St Thomas' Hospitals
University of Aberdeen
University of Glasgow
University of Ulster
University of Wales College of Medicine
University of Warwick
Wellcome Trust (PRISM)
Welsh Office Health Department
Professor N A Wright, Imperial Cancer Research Fund

APPENDIX 3

What is Medical Research? - Some definitions

1. The expression "medical research" is a broad one, embracing some forms of research which are not directly medical, and some activities which do not in themselves involve original research.

2. *Biomedical research* uses biological and biochemical science to explore the workings of the human body in sickness and in health. Some biomedical research is "basic", conducted for its own sake with no particular application in view; some is "applied" to the discovery of new drugs, drug targets and drug delivery systems, or to better understanding of diseases and how to prevent, palliate or cure. Biomedical research may be *clinical research*, requiring access to patients (or well volunteers); or it may not. Outside the pharmaceutical industry, clinical biomedical research is traditionally conducted by clinical academic researchers with access to patients by virtue of an honorary NHS contract, or by NHS medical staff who may or may not hold an honorary university appointment; it is funded by project grants awarded by the NHS, the MRC or a research charity on the basis of peer review; and it depends on the facilities of a "well-found" university department and its associated hospitals or general practices.

3. An application for a project grant must set out the protocols in accordance with which the research is to be conducted; but many projects are preceded by a stage of *pre-protocol research*, during which the research question is refined, appropriate research methods are identified and preliminary indicative results obtained. Pre-protocol research may be carried out in the researcher's own time, or alongside other work; but it may nevertheless involve service costs (Q194).

4. There are two further categories of research which, while they may be highly relevant to the NHS, are not biomedical. The needs of the populations served by the health services, the provision of services to meet those needs, and the social and behavioural roots of disease are all susceptible to research which will depend less on biology than on sociology, epidemiology, statistics, economics and behavioural science. In our report of 1988 we called this "*public health research*". That report referred also to *operational research*, otherwise known as "management science": systematic examination of the effectiveness of service provision and administration within the NHS (or any other organisation), in a "trouble-shooting" mode. We noted then that public health research and NHS operational research tended to be confused within the portmanteau category of "*health services research*"; and this is still the case. The MRC defines "health services research" as "the investigation of the health needs of the community and the efficiency and effectiveness of the provision of services to meet those needs".

5. Warwick University is one of a number of universities which, while not (yet) offering medicine at undergraduate level, is developing expertise in health services research; their evidence (p478) describes some of the research opportunities involved, and some of the problems of methodology. So does the evidence of the Royal Academy of Engineering (p460). The place of operational research (or "management science") in the NHS is explained at p364; two postgraduate courses in health operational research are being launched this year.

6. Professor John Swales comments (p253), "The clinical research community mainly educated in biochemistry and physiology have tended until recently to estimate [health services research] fairly lowly. It did not attract many high grade academics and applications for funding were in the main of low quality. The obvious mismatch between potential need and resources available has led to increased concern over efficiency and effectivenss of prevention and care in the health service. As a result of the NHS R&D Strategy and initiatives by for instance the MRC, there is much more high quality research at this more applied end of the medical research spectrum".

7. The distinctions noted above may be illustrated with examples taken from a list of research projects funded by the South Thames RHA Project Grant Scheme in 1994-95:

> *Clinical biomedical research* Investigations to detect Borrelia burgdorferi DNA in the synovial fluid of patients presenting with an unexplained large joint arthritis; effects of magnesium in unstable angina and acute ischaemia.
>
> *Public health research* Parents' beliefs and management of childhood asthma; a community survey to assess the needs of bereaved children.

Operational research Randomised intervention trial of long-term effect of the introduction of radiological examination; attitudes of A&E medical staff to primary care consultation skills training.

8. All research may be placed on a scale between being purely *curiosity-driven* and being *directed*. Economic realities restrict the freedom of researchers to follow their nose; on the other hand, the nature of science is such that direction in itself is no guarantee of useful results. Most research falls somewhere in the middle of the scale, as researchers adjust their enthusiasms to match the priorities of the various funding bodies, while funding bodies adjust their priorities to take account of scientific opportunity. However, by and large biomedical research is more dependent on curiosity, while health services research is more susceptible to direction (Q875).

9. Other forms of activity may, in some contexts, find their way under the heading "medical research", while lacking the element of originality which research is generally expected to include:

— *Evaluation* or *health technology assessment*: a branch of operational research consisting of the examination of a new or familiar intervention in service to assess its effectiveness and/or cost-effectiveness;

— *Clinical trial*: evaluation in clinical conditions. A *multi-centre trial* is one carried out in more than one NHS setting. A *randomised controlled trial* is one involving an experimental group and a control group (undergoing the same experience as the experimental group but without receiving any active medicine), both groups being so large, and the process of assigning people to one group or the other being so random, as to render the two groups homogeneous.

— *Literature review* or *overview*: examining the outcomes of various pieces of research in the same field to find out what is known, what is unknown and what is uncertain or disputed. The process may be more or less *systematic*. *Meta-analysis* is a restricted variety of literature review: it involves summating the results of a number of published trials of a particular intervention in order to increase statistical power.

10. This report also makes reference to activities which, while related to research and sometimes discussed in the same breath, must be distinguished:

— *Audit*: examining practice and outcomes in a particular time and place to see whether they conform with expectations, with a view to informing and improving management rather than adding to general knowledge;

— *Critical appraisal*: examining research results with a view to informing and, where appropriate, modifying practice or purchasing.

11. Finally, research is sometimes classified according to the professional group most involved in conducting it, or most interested in its findings; and these two forms of classification are sometimes confused. Thus *medical research* is sometimes used to mean research carried out by doctors, or research into the medical conditions and interventions which are the professional province of doctors; the same confusion may arise over the expressions *GP research*, *dental research*, *nursing research*, *research in the therapies* etc. In the title of this report, "medical research" is used in its broadest sense, embracing any research bearing on human health and health services, regardless of professional boundaries.

APPENDIX 4

Paying for Medical and Dental Research

Total expenditure

1. The question "How much does the United Kingdom spend on medical research?" cannot be answered simply or definitively; but the Parliamentary Office of Science and Technology (POST) has calculated that "Over £2bn a year are spent on research which has some potential relevance to the NHS".

Table 1: UK expenditure on medical research

£m	1990-91	1991-92	1992-93
Pharmaceutical industry	1151	1262	1451
MRC	203	228	253
Charities	193	211	269
Health Departments and NHS	71	59	56
SIFTR	343	366	385
HEFCs	224	244	241
TOTAL	2185	2370	2655

Source: POST note 50, March 1994, "Research and the NHS Reforms".

2. In *Research for Health* 1991, the Department of Health performed a similar calculation for 1989-90, and produced a total of £1.5bn; *Research for Health* 1993 proposes a total of around £2bn for 1992-93. These figures relate to England only.

Different kinds of cost

3. The costs of research can generally be divided into two: the direct costs, of staff and materials dedicated to the project in hand; and the indirect costs or overheads of the university or other institution providing the "well-found laboratory", with accommodation, permanent staff and other necessary infrastructure. Clinical research incurs a third category of cost: the cost of clinical services (time in hospital, appointments, tests, procedures etc - see MRC p47 and UKCCCR BMJ 13 August 1994 p457) which, while not part of the research, would not be incurred if research were not taking place. These costs are referred to as "service support costs", or "excess service costs".

4. Who meets the various costs of clinical research in an NHS setting is a complex question. Broadly speaking, the medical research charities pay direct costs only, whereas (since the "dual support transfer") the MRC also contributes to overheads, and commercial sponsors are expected to pay full cost. The HEFC block grant is intended to support the well-found university laboratory, while SIFTR (or "non-SIFTR") is awarded to NHS hospitals in recognition of the excess service and infrastructure costs of involvement in teaching and research. Each of these positions is described in more detail below.

Knock-for-knock

5. In the days before the NHS internal market, financial relations between a teaching hospital and its associated medical school were governed by the principle of uncosted mutual support, or "knock-for-knock", whereby when marginal resources of staff time and facilities were provided by the hospital for academic purposes, or by the university for clinical purposes, no money changed hands. In its 2nd Report (June 1990), SGUMDER recommended, "Universities and the NHS should be discouraged from attempting to disaggregate knock-for-knock arrangements in respect of medical staff time by means of resource-consuming studies based on time measurement or cost accountancy techniques"; however, under the rigorous financial regime of the new NHS, knock-for-knock is rapidly breaking down (pp72, 78; QQ78, 934).

6. The knock-for-knock principle has also extended to relations between the NHS and the MRC and charities. The AMRC hope to preserve it (QQ222-3): their member charities have no wish to charge the NHS for clinical services provided by charity-funded staff, and are advised to resist attempts by the NHS to charge for such facilities as the use of an outpatient room to conduct a clinic or

additional diagnostic tests. The MRC (Q72, p65) would prefer to avoid cross-charging, but is prepared to consider it: in particular, they see "a strong case for charging for additional duty hours currently paid by MRC for our junior clinical employees on call for the NHS".

Department of Health

7. Table 2 shows how the Department of Health has progressively identified its expenditure on R&D since the launch of the R&D Strategy, and what progress has been made towards the target of spending 1.5 per cent of the NHS budget on research.

8. "DH/NHS" refers to the Department of Health Centrally Commissioned Programme, other departmental research, the NHS programme directed by the CRDC, and research by non-departmental public bodies (Q5). SIFTR, Non-SIFTR, the SHAs and local expenditure are described below; research spending by the RHAs is described in Appendix 8.

Table 2: NHS expenditure on medical research

£m	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
DH/NHS	30	41	49	47		62
SIFTR (100 per cent)		343	366	385	397	482
SHAs						253
Non-SIFTR	-	-	-	2	2	2
RHAs	17 (LORS)	21 (LORS)				35 (RDRDs)
Local purchasers and providers	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Total known spending on R&D (including 25 per cent of SIFTR)	225			300+		437
R&D as percentage of NHS budget	0.9			1		1.2

Sources: Annual Review of Government-Funded R&D; Research for Health; POST note 50; HL Paper 82-I 1992-93, Q595; DH evidence p5, Q555. NB incomplete data and changing definitions make sums and comparisons misleading.

9. Professor Peckham told us in November how and why the 1.5 per cent target was first set (Q2). "When the programme started in 1991 it seemed to me very important to establish the principle of a percentage commitment of funds to R&D and that we would not, on a year by year basis, have to negotiate a sum...we then made, if you like, an empirical decision based on the usual R&D expenditure of service industries, which is 1-2 per cent, and set the target figure of 1.5 per cent". He added, "As the recommendations of the Culyer report are implemented we will no longer need to be enslaved by it". When we met him again in March, he said that the Secretary of State had given an "indication that, if the case were made, it would be looked on favourably to build up the research budget to 1.5 per cent" (Q1280). Sir Leslie Turnberg comments, "In big organisations such as the NHS, it would not be over-spending to spend 1.5 per cent on R&D, considering the extent of the exercise" (Q880).

10. Professor Culyer considers that the figure of 1.5 per cent was "plucked from the air" (Q516). "I think there are dangers in hanging on to it too long because...it might turn out, when we start really accounting for money spent on R&D, that we are already there".

SIFTR

11. SIFT was initiated by the NHS Resource Allocation Working Party (RAWP) of 1976. RAWP introduced the principle that RHAs were funded according to the number and needs of their populations ("weighted capitation"). However it recognised that service facilities used for education were more costly to provide and were spread unevenly across the Regions; a special increment was therefore needed, top-sliced and distributed on a different basis.

12. The quantum of SIFT was calculated as follows. The total cost of teaching hospitals was compared with the total cost of a sample of 45 non-teaching hospitals, to produce a figure for the excess cost of teaching hospitals. This figure was reduced by 25 per cent and divided by the total number of undergraduate students, with each dental student counted as a quarter of a medical student, and London students counted as more to reflect the higher costs of London, to produce a median cost per student. SIFT was then allocated to Regions according to actual student numbers.

13. The reason why SIFT was originally set at 75 per cent of the excess cost of teaching hospitals is disputed. Officially, this represented the view that only 75 per cent of the excess cost could be attributed to undergraduate teaching. According to Sir Colin Dollery, however (Q121), it was an attempt "to impose an efficiency gain".

14. It should be noted that the figure arrived at for total excess costs has never been disaggregated by "bottom-up" analysis. This was made clear by Sir Christopher France, then Permanent Secretary at the Department of Health, when he met this Committee in April 1990: "We do not in our analysis of SIFT try to distinguish how the excess costs arise. We are covering all the excess costs...there is no attempt to fillet out the service costs generated by training other than medical undergraduates" (4th Report 1989-90, HL Paper 51, Q26).

15. In 1980 SIFT was reviewed by the Advisory Group on Resource Allocation (AGRA), which found that, while SIFT seemed to work for medical teaching hospitals, it was not adequately supporting dental hospitals. A dental hospital's whole *raison d'être* is teaching, yet SIFT turned out to be protecting only about two-thirds of dental hospitals' total costs. At AGRA's recommendation, SIFT was recalculated to cover 85 per cent of the total cost of dental hospital outpatients; this resulted in an increase of 30 per cent. A further £150,000 per dental school per year was added to SIFT for capital replacement of dental equipment.

16. In 1988, SIFT was reviewed again as part of the Review of the RAWP Formula (RoR). It was decided, at this Committee's recommendation, to take account of research as well as teaching, and therefore to fund 100 per cent of excess cost instead of 75 per cent; but total excess cost was recalculated, and found (mistakenly, according to the Council of Deans, p77) to have declined; the net result was an uprating by 2 per cent, and the rechristening of SIFT as SIFTR (Service Increment for Teaching and Research). Sir Christopher France defended this arithmetic in 1990, as "applying a larger percentage to a small difference" (Q23); Sir Colin Dollery, on the other hand, is sceptical (Q121). Mr John James, who was a member of the RoR team, comments (Q523): "The original 75:25 split was derived by multiple regression analysis of an awful lot of teaching hospitals with wildly different figures. I personally would not say that you could say that it accurately defines what was necessarily incurred by way of extra costs as a result of undergraduate teaching and what as a result of research. Having made that comment, I do not feel any lack of confidence about putting 25 per cent into the research pocket and using it".

17. This episode is the origin of the widely-quoted assumption that SIFTR can be divided 75:25 between excess costs of teaching and excess costs of research. It will be seen, however, that this figure is derived from a series of pragmatic decisions, rather than from any authoritative calculation.

18. In 1991 SIFTR was uprated to allow for the imposition of capital charges on NHS institutions, on the ground that teaching hospitals are generally larger and more generously equipped than they would be if they were not teaching hospitals. In 1993, on the recommendation of SGUMDER, it was increased to allow for dental students receiving medical and surgical training.

19. In 1990, SGUMDER called for a further review of SIFTR. A "multivariate statistical analysis", or "econometric study", was carried out in 1993-94; this resulted in the announcement in November 1994 of an extra £40m for 1995-96 (DH p12, QQ35, 570). According to Sir Colin, who is a member of SGUMDER, the study concluded that SIFTR fell short by £135m; it was decided not to produce the whole amount in 1995-96 since in 1996-97 SIFTR will be replaced by the funding systems proposed by the Culyer report and the effect would be to "give the money to some institutions and then take it away again promptly" (Q121). The OST, writing to us in February 1995, still acknowledged "a considerable funding shortfall" (Q458).

20. From 1995-96, as recommended by a SGUMDER sub-group, "dental SIFTR" will be increased, so as to cover the full cost to dental hospitals of the out-patient work needed to teach the GDC curriculum (Q585). Other service costs will be met by purchasers, or by the new R&D budget.

21. SIFTR is distributed by RHAs to teaching hospitals on criteria of their choice. SGUMDER (2nd report, June 1990) proposed the following criteria: the amount of teaching and of non-commercially funded research; concentrations of expertise and facilities supporting teaching and research; and the effect of academic priorities on the flow and treatment of patients. Regions are not yet required to differentiate teaching from research in their SIFTR contracts, but some already choose to do so (Q562). "While the bulk of SIFTR continues to be distributed to providers on the basis of student numbers - ie the same way as the allocation from the centre to regions - the process has become increasingly sophisticated in recent years and is often informed by detailed local studies of teaching and research costs; there is an increasing tendency for traditionally non-teaching hospitals to undertake some teaching and many now receive small amounts of SIFTR" (Culyer report, Appendix G, paragraph 24).

22. The UFC Medical Committee (1st Report, March 1991) found that most Regions distributed the teaching element of SIFTR among hospitals on a banding basis (eg 10:3:1) according to the amount of teaching, in consultation with the universities concerned, which were generally content with the system. The research element was more problematic: different Regions used different indices, including submissions to Ethics Committees, research grant income and staff numbers, none of which seemed to the Committee to be satisfactory. The T and R elements are split 75:25 by most Regions, but not by all: variation ranges between 65:35 and 90:10.

23. What concerned the UFC Committee most was the application of SIFTR within the hospital. SIFTR was not currently accounted for separately; if it were, they suspected that it might turn out to be entirely committed to supporting general clinical services and reducing contract prices; "freeing money for funding specific service consequences of teaching and research may prove extremely difficult". SIFTR was already causing extra paperwork; the Committee supported those hospitals which planned to top-slice SIFTR to pay for an administrator, to collect data and monitor how SIFTR is spent (cp HEFCs Q1372). They regarded as acceptable proposals in some hospitals to use SIFTR to support the medical library, but deplored the decision of one RHA to use SIFTR to pay for distinction awards. Finally, they drew attention to the lack of any Regional reserve "to provide for developments in teaching and the translation of research into clinical practice".

24. When the UFC Medical Committee revisited SIFTR in their 2nd Report a year later, they found that, though most teaching hospitals now employed a SIFTR officer, paid for out of SIFTR, the problem of allocating SIFTR within the hospital remained unsolved. This was due partly to "the complexities of hospital funding coupled with an imperfect knowledge of full costings within the NHS"; and partly to tension between two views of SIFTR, which may be seen either as core funding for the well-found hospital required for teaching and research, or as a "provider subsidy" to enable teaching hospitals to survive in the market. The Committee reported that, if SIFTR was a provider subsidy, then for some teaching hospitals in big cities it was too low; that offering SIFTR to district hospitals involved in teaching created a negotiation in which the medical school sometimes came off worse; and that some teaching hospitals were entering a "cycle of deprivation", losing patients, students and SIFTR to district hospitals.

25. An average teaching hospital, or group of hospitals, associated with a medium-sized medical and dental school might receive £24m per year from SIFTR (CVCP p77). The Department of Health was unable to tell us all the individual allocations of SIFTR (p198); but we have gathered the following:

Table 3: SIFTR allocation to certain hospitals

	SIFTR	Total hospital budget	SIFTR as percentage of budget
Birmingham	£24m		
Leicester	£10m	£100m	10
Cambridge	£14.5m	£120m	12

26. It will be apparent from the above account of the evolution of SIFTR that it has evolved in the absence of definitive answers to four basic questions. First, precisely what do teaching and research add to the cost of a hospital? According to the Department of Health (p11), "Attempts to devise a possible menu of service items which form a part of or facilitate research activities and may lead to excess service costs have so far been unable to overcome problems of definition, particularly in relation to the funding of clinical trials...We recognise that there is a need for more work on the attribution of costs between external research funders and the NHS". Professor Swales warns, "The

activities of the teaching hospital are very well integrated, clinical service and teaching are particularly closely integrated" (Q851); in respect of teaching, there may be credits as well as debits, eg if students take on outpatient cases.

27. Secondly, what is the true proportion of the excess costs of teaching to the excess costs of research? The NHS Director of Finance admits, "75:25 is an interim working assumption" (Q562); according to the Council of Deans (p73), "The concept that 25 per cent of SIFTR is used for research has no real basis other than conjecture"; NAHAT did not dissent from the proposition that it was nothing more than a guess (Q944). Furthermore (p78), "There is a clear opinion in the medical schools that the excess costs of the university hospitals are as much related to the numbers and quality of clinical academic staff, for which student numbers have been an approximate proxy. This proxy probably holds true except for a small number of very research-productive medical schools". Dividing clinical academic staff into teachers and researchers, if it were possible at all, would produce a result very far from 75:25. The MRC and AMRC do not even believe in the adequacy of the proxy: "The distribution of research is very different from that of undergraduate teaching" (MRC p48; cp AMRC Q199).

28. Professor Edwards of Edinburgh asks "how you could possibly disentangle the teaching infrastructure from research. In many instances it is part of the same infrastructure". Professor Culyer believes that any attempt to cost teaching and research separately is doomed; the only rational basis for an apportionment between teaching and research is a judgement about priorities, or "what the public sector, as it were, wanted to buy" (Q522, p170).

29. Thirdly, what is SIFTR meant to be spent on? When it began, in the days before the purchaser-provider split, it was simply an item in the income of a teaching hospital, unhypothecated to any specific purpose. As the MRC put it in evidence to the Culyer task force, "SIFTR allocations...are generally viewed by hospitals as a non-specific provider subsidy. They are therefore not available to serve as a special allocation targeted at meeting the excess service costs of research projects" (p48). The tenth of the Ten Key Principles set out in the 2nd Report of SGUMDER (June 1990) and endorsed by the Secretaries of State for Health and Education was that "SIFTR should be allocated on the basis of jointly agreed service plans to support teaching and research"; and in its 3rd Report (January 1993) SGUMDER recommended that hospitals should be obliged to contract for SIFTR with their RHA. The CVCP proposes the following statement of the purposes of SIFTR: to ensure sufficient clinical facilities for undergraduate teaching; to make research possible in all medical schools, "in order that doctors shall be educated in a proper environment"; and to support the clinical infrastructure for research funded by project grants (p87, Q156). These are worthy aspirations; but as far as we know they have never been officially endorsed. As Dr Kendell put it, "The trouble with this money is that everybody regards it as theirs" (Q1129).

30. Finally, what is SIFTR actually spent on? According to Sir Leslie Turnberg (Q894), this is "extraordinarily difficult to tease out". The Leukaemia Research Fund speaks for many of our witnesses: "The concern is that the R component of SIFTR has been used to hold down the cost of the clinical service provided by teaching hospitals and other specialist centres, rather than underpin research" (p452). Sir Colin Dollery told us (Q124):

> "There was an attempt in Southampton, a fairly detailed attempt several years ago, to try and find out what SIFTR was spent on and the answer that came out was that some things are easy to define, where there is a pathology contract, where there are shared costs of premises and security and so on, there are identifiable elements but they account for well under half of SIFTR and the main component simply goes into a general subsidy on costs to provide better records, better X-ray facilities, better pathology, better nursing and so on. My own opinion is that you could arrive at an attribution for "R" and "T" but the largest component of that would be guesstimates rather than strict calculations".

31. Mr Martin Else, Chief Executive of the Royal Free Hampstead NHS Trust, shared his "guesstimate" with us (Q945): he believes that, in a main teaching hospital, as much as 80 per cent of the research element of SIFTR goes on infrastructure, the "core element of service that needs to be in place in order for both good teaching and good research".

32. The answers to all these questions are different in respect of dentistry. Teaching does not merely add to the cost of a dental hospital; it is its *raison d'être* (p108); hence the decision noted above to move to full-cost funding from 1995. The proportion of teaching costs to research costs within the dental hospital is not established, but is believed to be 95:5, rather than 75:25 (p107). According to the Department of Health (p385), "There is no consensus on the size of the research

element of dental SIFTR, except that it is considerably less than the 25 per cent attributed to medical SIFTR".

33. Scotland, Wales and Northern Ireland all have equivalents of SIFTR, called respectively ACT (Additional Cost of Teaching), SIFTR and STAR (Supplement for Teaching and Research). ACTR in 1994-95 totalled £94m (Q1100); STAR in 1993-94 came to £24.7m. The Scottish Office has never endorsed 75:25 or any other figure for the split of ACT between teaching and research, "because we did not have an empirical basis for making such a decision" (Q1102). The teaching Health Boards recently commissioned Price Waterhouse to analyse ACT; they endorsed the 75:25 split, but according to the Scottish Office (Q1103) their study was flawed. Dr R Kendell, the Scottish Chief Medical Officer, considers that a 50:50 split would be "not implausible" (Q1126).

34. The amount of SIFTR or equivalent paid out per undergraduate medical student is not the same around the UK. The amounts for 1994-95 are as follows:

England	£37,744
London	£41,141
Wales	£37,744
Scotland	£42,362
Northern Ireland	£37,744

35. SIFTR is payable only to hospitals, not to the primary sector (GPs) and only in respect of medical and dental students, not student nurses. See Appendix 10.

36. Now that it has been decided to ascribe 25 per cent of SIFTR, in the first instance, to the new NHS R&D budget, an Advisory Group has been set up to consider how to allocate the remaining 75 per cent, the teaching element (p370). Dr Graham Winyard, the Group's chairman, described this to us as "the last piece of the jigsaw" (Q583). The CDMS put it to us (p462), "There is an urgent need for liaison between the NHS R&D funding stream and the SIFT funding stream, with University representation on both, to ensure that infrastructure support of the main research base teaching hospitals is maintained".

"Non-SIFTR"

37. "Non-SIFTR" provides limited support - too limited, according to the MRC (p48) - for the infrastructure and service costs of research in non-teaching hospitals. "The non-SIFTR awards are awarded centrally by the Department [of Health]. It is available only to hospitals which are not SHAs or eligible for SIFTR because they do no undergraduate teaching. To qualify in any one year, units have to attract external research grants which equal or exceed £100,000 and one per cent of their overall budgets. Five NHS Trust hospitals successfully applied for non-SIFTR awards in 1994-95", to a total of £2m (DH pp5, 198, Q8).

Special Health Authorities

38. In London there are eight hospitals associated with postgraduate medical institutes. Until 1994, these hospitals were run by SHAs, and funded centrally by the Department of Health outside the NHS internal market. However most of the SHAs have now become Trusts and entered the market, following recommendations of the Report of the Inquiry into London's health service, medical education and research (the Tomlinson report) of October 1992. For 1994-95 they continued to receive a central subvention of £253m: £201m as "central support for clinical services necessary to sustain approved R&D programmes", allocated by reference to the Review of the R&D taking place in London postgraduate SHAs (the Thompson review) of June 1993, and £52m as central support for patient care unrelated to research ("CASPE"). The former is intended to be subsumed into the new NHS R&D budget, returning to the SHAs in the form of excess service cost funding or facilities funding. The latter will be reduced to zero by 1997-98; there will be a compensatory increase in market funding distributed to purchasers (DH Q604, pp5, 364).

Table 5: Special Health Authorities

Former SHA hospitals	Postgraduate institutes
Hammersmith Hospital	Royal Postgraduate Medical School
Great Ormond Street and Hackney Hospitals for Children	Institute of Child Health
Moorfields Eye Hospital	Institute of Ophthalmology
Royal Marsden Hospital	Institute of Cancer Research
Eastman Dental Hospital	Eastman Dental Institute
Bethlem and Maudsley Hospitals	Institute of Psychiatry
National Hospital for Neurology and Neurosurgery	Institute of Neurology
Royal Brompton Hospital	National Heart and Lung Institute

Note: The Hospital for Tropical Diseases, associated with the London School of Hygiene and Tropical Medicine, is not an SHA, but part of UCL Hospitals NHS Trust (p363).

39. When we met Sir Colin Dollery, who as Dean of the Royal Postgraduate Medical School (RPMS) is deeply interested in the future of the Hammersmith Hospital, he was pessimistic. "The ex-SHA hospitals will have been taken from a situation of complete central funding into the internal market over a very short period of time, and without the local purchasers having funds, in many cases, to afford to buy...I foresee a very difficult future for the ex-SHA hospitals unless the policy is modified to a degree" (Q139). On the other hand, Dr Malcolm Green, Director of the BPMF which brings the other SHAs together, is content with the transitional arrangements (Q606): "The ex-SHAs have been...able to enter the internal market with a sufficient subvention for R&D to be able to take forward their aspirations".

40. The Tomlinson report recommended that the postgraduate institutes should become part of one or other of the multi-faculty colleges of the University of London. Such arrangements are now being negotiated (p76, Q600).

Local and "implicit" NHS research expenditure

41. An unknown amount of NHS resource finds its way into research at the level of local purchasers (DHAs, FHSAs and GP Fundholders) and providers (Trusts), whether explicitly or implicitly. Warwick University (p478) offers an instance of explicit funding by a provider: three joint appointments by the University and Walsgrave Hospital Trust, including a Professor of Medicine. Since the concept of "implicit" research is somewhat elusive, it is worth quoting in full what the Culyer report says about it:

> "2.24 Concern however was expressed [by witnesses to the Task Force] that neither commissioning nor responsive funding would support all the NHS R&D-related activity in the NHS. We found a widespread belief that the R&D currently funded explicitly by the NHS might be only a fraction of the total. Much of the "implicit" R&D-related activity was thought to fall outside the scope of R&D as presently defined in the NHS R&D Strategy, but was nevertheless considered to be of vital importance to the NHS.
>
> 2.25 Such implicit activity was often of high quality, undertaken by clinical scientists and by staff in routine laboratories, doctors, nurses, radiographers and others in clinical practice with training and experience in research, and directed towards providing new knowledge and techniques of general value to the NHS. It was the breeding ground for many new ideas. Often such work might lead on to an R&D project. Such activity was of great value to purchasers and providers of health care yet its value was often not recognised by them. There was concern that it would be squeezed out unless it was recognised and funded explicitly...
>
> **R&D in NHS providers funded on their own account**
>
> 3.34 We understand that NHS providers are currently funding a considerable amount of R&D and R&D-related activity on their own account out of their income for patient care...

> 3.36 It is helpful to consider this "implicit" activity in four categories:
>
> — work which is found to meet the national criteria for R&D (Appendix F);
>
> — projects which do not currently meet all the national criteria for R&D but which are nevertheless considered to be of sufficient value or potential value to the NHS in the short or long term to warrant continuing support;
>
> — pre-protocol and curiosity-driven exploration. Much work of this kind is undertaken by NHS clinical scientists and others with training and background in R&D (paragraph 2.25). It is the painstaking process of exploring and developing ideas, sometimes over many years, and which can often lead to a valuable R&D project or to a better service for the NHS generally. The work is firmly rooted in the day-to-day provision of clinical services and significantly enhances their quality and cost-effectiveness; and
>
> — work that is not worth supporting...
>
> **Providers' own account R&D** [from Appendix G]
>
> 17 Providers fund a considerable amount of R&D, service support and R&D-related activity on their own account. Some of this is funded explicitly from their own special trustee accounts or through patient care contracts with the agreement of their purchasers. Much more is believed to be funded implicitly from patient care contracts. (Since a mechanism to identify and cost R&D in providers only became available in October 1993 we have to rely on the evidence of local surveys.) This implicit R&D activity embraces R&D sessions in consultants' and other staff contracts, as well as possibly a considerable amount of unaccounted use of other NHS resources for R&D and service support for R&D, including the type of activities described in paragraph 2.25 of the report."

42. Professor Peckham told us in November, "The identification of what we might call hidden or implicit research funds will be important if they are to be protected and ring-fenced, and that will require an effort, not just on our part but from the NHS and academic community more generally" (Q1). Professor Culyer told us in January, "The implicit research actually costs providers of health care money which at the moment is reflected in their prices. This is one of the reasons why the major research centres have higher prices and might lose out in the internal market. The sooner it can be identified and protected and removed, therefore, from the costing element in the market for health care, the better both for health care and for research" (Q516). When we met the NHS Director of Finance in February (Q556), work on this was still at an early stage.

Higher Education Funding Councils

43. The HEFCs fund universities by block grant (p393), so it is not meaningful to ask how much support they give to medical research. It is however possible to say how much of the block grant is "earned" by medical research. Most of the "R" (research-related) element of each grant is calculated on the basis of the number of research-active staff in each department, combined with that department's performance in the most recent RAE and weighted according to the relative expensiveness of the discipline. In England, "QR" calculated on this basis accounts for 95 per cent of R: for 1994-95, 20.5 per cent of QR (£120.5m out of £590m) was "earned" by medical subjects, 13 per cent by clinical medicine and dentistry and 7.5 per cent by non-clinical disciplines.

44. It is also possible to say something about how much is spent on medicine in the universities. According to the CVCP, "University medical and dental departments spent about £350m from block grant and tuition fee income in 1992-93, including about £100m on research" (Briefing Note, November 1994).

Table 5: HEFCE research funding: QR quanta for 1994-95, £m

Clinical Laboratory Sciences	16.9
Community Based Clinical	14.2
Hospital Based Clinical	37.5
Clinical Dentistry	7.7
Pre-clinical Studies	11.6
Anatomy	7.4
Physiology	9.2
Pharmacology	3.4
Pharmacy	8.0
Nursing	1.3
Other Studies Allied to Medicine	3.4

Research grants and contracts

45. Besides the block grant, university departments involved in research may attract research grants and contracts from a variety of sources. Medical and dental research in the former UFC institutions (the "old universities") earned £335m in this way in 1992-93. 44 per cent of this came from charities, 32 per cent from public bodies and 10 per cent from British Industry; only 2 per cent related to dentistry (p88).

Table 6: Research grant and contract income of UK "old" universities 1992-93, £m

	Clinical medicine	Dentistry	Pre-clinical	Total
Research Councils	45.3	1.0	7.1	53.4
UK charities	131.0	1.0	14.5	146.4
Government (excluding UFC)	31.5	1.2	1.7	34.5
Local authorities	0.6	0.0	0.0	0.6
Public corporations	0.3	0.1	0.0	0.5
Industry	28.5	1.4	2.0	31.9
Health Authorities and hospitals	18.6	0.5	0.5	19.5
EEC	5.2	0.1	0.6	6.0
Overseas	19.6	0.4	1.4	21.5
Other	19.3	0.6	0.6	20.5
TOTAL	300.0	6.4	28.4	334.8

Source: UFC Form 3

MRC

46. The Medical Research Council received £290m in 1993-94, mostly (90 per cent) by grant-in-aid, and spent it as shown in Table 7.

47. Like all the Research Councils, the MRC pays for the research which it supports to the extent of direct costs plus overheads: full overheads in the case of its establishments (the National Institute for Medical Research at Mill Hill, the recently closed Clinical Research Centre (CRC) at Northwick Park and 53 Units associated with university departments), and in the case of project grants a contribution, increased to 40 per cent of direct staff costs since the "dual support transfer" of £150m to the Science Budget from the HEFCs in 1992. The MRC does not pay excess service costs; and the Concordat which was struck between the MRC and the Health Departments in 1981 and renewed in 1991 commits the Health Departments to ensuring that, "provided that adequate notice is given to the NHS, the funding of the NHS and the policies of purchasers and provider units continue to make provision for the necessary service support for that research supported from MRC funds". Commenting on the Concordat, Sir Dai Rees, Secretary to the MRC, said, "It is expensive in effort but in general it works very well" (Q81).

Table 7: MRC expenditure 1993-94, £m

Research units and external staff	129.0
Grants	97.7
Training awards and fellowships	21.4
International subscriptions	5.2
TOTAL ON RESEARCH	253.3
Administration and new building	34.9
TOTAL	288.2

Source: MRC Annual Report 1993-94

48. The MRC is thought of principally as a source of funds for high-quality biomedical research. However it has a long history of involvement in health services research (HSR - p69), and is currently developing an Initiative in HSR, with an emphasis "on research into methodology underpinning HSR, further applied HSR and on training and career development" (pp45, 68, Q82). The MRC has developed a major HSR centre in Bristol, with a network of collaborating centres; has increased support for research on the determinants of health and disease; has established HSR fellowships, some co-funded with RHAs, and joint RHA-MRC small grant schemes (Q83); and has rechristened its HSR Committee the Board for Health Services and Public Health Research. The proportion of MRC expenditure devoted to HSR has risen slowly in real terms since 1981; in 1993-94 it was 1.5 per cent (£4.4m out of £288m); the MRC expects it to rise a little more steeply over the next few years (p455).

Other Research Councils

49. The contributions of the EPSRC, BBSRC and ESRC to medical research are smaller but not insignificant. The EPSRC has set out for us how it puts £5m each year into research in medical engineering, chemistry and medical informatics (p442).

Charities

50. In 1993-94, the members of the Association of Medical Research Charities contributed £317m to UK medical research, more than the MRC. 96 per cent of charities' extramural grants go to universities (Q185); only about £6m goes directly to the NHS (Culyer report, Appendix G, paragraph 19).

Table 8: Major UK medical charities research expenditure budgets, £m

Wellcome Trust	150.0 (1994-95)
Imperial Cancer Research Fund	49.0 (1993-94)
Cancer Research Campaign	45.2 (1994)
British Heart Foundation	26.2 (1994-95)
Arthritis and Rheumatism Council	15.8 (1993-94)
Leukaemia Research Fund	10.5 (1993-94)

Source: AMRC Handbook 1994-95

51. The Wellcome Trust deserves special mention. Alone among the major medical charities, it is free to fund research in any field (including animal health and the history of medicine); it derives its funds from a single large endowment rather than continuous voluntary giving; its income has grown enormously since it began to sell its shares in Wellcome plc in 1986 (£15m in 1984, £250m in 1994), and will receive a further boost to around £300m p.a. from the sale of the Trust's remaining shares to Glaxo. It therefore occupies a position comparable with that of the MRC. Although hitherto most of the Trust's activity has been confined within the British Isles, the will of the founder, Sir Henry Wellcome, imposes no geographical restriction; according to a recent policy statement, "The Trust is reviewing its international programme, and re-assessing its portfolio of grant-giving in countries outside the UK" (Sources: Wellcome Trust Statement of Policy 1995; POST Select Committee briefing February 1995, *Glaxo and Wellcome*; and 2nd Report by the Commons Science and Technology Committee 1994-95, HC 256).

52. Another identifiable block of charitable funding, besides the Wellcome Trust, is that provided by the seven major charities who (with the MRC) make up the UK Co-ordinating Committee on Cancer Research, and put more than £100m per year into cancer research, out of money raised from year to year from the public.

53. It is the declared position of the AMRC that "charities do not support the infrastructure cost of universities on responsive project grants, programme grants and fellowships" (Q228); nor do they expect to be charged by the NHS for excess service costs, since these are supposedly covered by SIFTR (Q223). The Leukaemia Research Fund (p452) and the Arthritis and Rheumatism Council (p413) report that they are having difficulty holding this line.

Industry

54. Pharmaceutical R&D is an area of substantial investment and considerable success for the UK. Five of the world's 20 best-selling pharmaceuticals were researched and developed in the UK; almost every major international pharmaceutical company conducts research here; and the UK receives 8 per cent of the industry's global R&D budget (£1450m out of about £18bn in 1992) though accounting for only 6 per cent of world production and 3 per cent of global consumption (Source: ABPI). The 200 companies which spent the most on R&D in 1993 (according to the "R&D Scoreboard" produced by Company Reporting Ltd for the DTI) included 13 British firms; of these, four were pharmaceutical companies (Glaxo, £739m, 42nd; SmithKline Beecham, £575m, 58th; Zeneca, £490m, 63rd; Wellcome, £325m, 81st). Much pharmaceutical R&D is chemical rather than medical, and much is conducted in-house; but the industry is also a significant sponsor of biomedical research in universities, biotechnology companies and NHS settings.

55. The ethos of the pharmaceutical industry was well described to us by Dr Peter Doyle, Research Director of Zeneca Ltd (Q797). Companies have a duty to their shareholders; but they are also "working in an agreeable conspiracy with health services and with all those concerned in medical research and health care to provide treatments which are value for money".

56. The UK medical equipment industry is not such a success. According to the Royal Academy of Engineering, it has "withered, although the UK has been fruitful as the birthplace of new technologies which have been exploited abroad" (p460). The Institute of Physical Sciences in Medicine (IPSM) (p449) intends to try to regrow the industry "from seed" by holding an Innovation Trade Fair. Medical engineering research is supported by the EPSRC and LINK, but according to the Academy it does not receive its fair share from the MRC or the Wellcome Trust. Whereas the pharmaceutical industry is dominated by a few very large firms, many of the 700 British medical devices companies are small (CSTI p439).

57. Dr Doyle (Q800) considers that the UK medical equipment industry is "under-rated". There are several healthy small firms with good potential for exports, but their image suffers from invidious comparison with the pharmaceutical giants.

58. Dr Doyle went on (QQ801-810, 835) to explain the basis on which a pharmaceutical company commissions a clinical trial in the NHS. A contract is made either with an intermediate organisation, or directly with a clinician (normally a teaching hospital consultant) with the right staff and access to the right patients. Payment is normally per patient, plus in some cases certain salary and equipment costs. Across the range of countries where adequate quality can be achieved, the cost per patient in the UK is about average; costs may be 1½-5 times higher in the USA or Canada, and half as much in Eastern Europe.

59. NHS institutions receive no public subvention to support commercial research; they are expected to recover full costs. The assessment and recovery of costs is left to the institution, but the Department of Health issued guidance on costing in October 1993 (DH p11). Professor Stephen Holgate, the new NHS Director of Trials, regards industrial trials as "a revenue-earning aspect of the Health Service which I think could be very advantageous" (Q1271).

60. Professor Swales suggests (p254) that this has led to "a two-tier system for clinical trials", with the pharmaceutical companies in "a relatively privileged position" compared with other funders who depend for service support on the limited resources of the NHS. This problem is not confined to the UK. He comments, "The effectiveness and success of the NHS is not necessarily always served by the development of new drugs rather than other modes of management".

Research beds

61. "Research beds" is conventional shorthand for the concept of clinical facilities not merely appropriated opportunistically for research purposes from time to time, but dedicated to research and funded at full cost for that purpose. Such facilities may take the form of dedicated beds, which may or may not be physically identified and set apart; but in the current climate they are increasingly likely to take the form of outpatient facilities.

62. The Department of Health professes to know of no instance of a research bed anywhere in the world (p12); but they are an established feature of clinical research in the USA in the form of "Clinical Research Centres". Clinical services provided by a CRC are paid for in the usual way, but excess service costs are found from core funding, project funding or industrial sponsorship. There are over 100 CRCs, ranging in size from 4 to 20 beds. Some are specialised (eg 15-20 in cancer, 10 in genetics); most are general facilities, for which any clinical research project can bid. The biggest CRC is the National Institutes of Health's "Building 10" at Bethesda, Washington DC, with 4-500 beds (CDMS Q126, AMRC Q202). Of the 900 beds at Massachusetts General Hospital, 25 are research beds.

63. Research beds are unusual but not unknown in the UK. The MRC has maintained research beds at its Clinical Research Centre at Northwick Park Hospital. Now, however, the MRC is winding down the Centre, and launching instead a dispersed Clinical Research Initiative (p65); in their evidence to us, they pointed to the danger of research beds "divorced from the NHS and totally funded by research funders", that the advantages to both sides of intimate links between clinical research and NHS services will be lost (p64, Q62). We asked the Vice-Chairman of the AMRC whether his members were interested in funding research beds; his answer (Q202) was, "No". However we gather that at least two medical schools now have clinical research facilities outside the teaching hospital paid for by commercial sponsors, and that similar arrangements are under negotiation in other places.

64. Edinburgh University now has 20 research beds, funded originally by Syntex Pharmaceuticals and now by a number of pharmaceutical companies. The Dean of Medicine, Professor Christopher Edwards, commented, "I think there has been mutual benefit...in the increasingly cost-conscious world that we are living in, if there is no hedge that you can put round a particular area and say, that is going to have a special emphasis on research, more and more research will be displaced" (QQ1024-5). In Glasgow, according to Professor MacKie (Q1061), there is "a small suite in a clinical investigation unit which is funded fairly sequentially by one project after another from different pharmaceutical companies". We gather also that Dundee has 36 research beds associated with Drug Development (Scotland) Ltd.

European Union

65. Funds for pre-competitive medical research involving international collaboration are available from the EU Fourth Framework Programme for R&D. The Biomedical and Health Research Programme, BIOMED 2, has a budget of 336 mecu for 1994-98, for research in seven target areas: pharmaceuticals; biomedical technology and engineering; the brain; diseases with major socioeconomic impact; the human genome; public health and health services; and biomedical ethics. UK involvement in the programme is co-ordinated by the MRC.

APPENDIX 5

Human Resources for Medical and Dental Research

Medical education

1. *Basic medical education* comprises the period of *undergraduate medical education* followed by the period of *general clinical training*. The latter is the statutory term for the pattern of experience acquired as a House Officer during what is generally known as the pre-registration year. Completion of this stage of medical education leads to full *registration*.

2. *Basic specialist training* (or, as some would have it, *general professional training*) occupies two or three years following full registration, during which a doctor acquires increased but supervised responsibility for patient care as a Senior House Officer or Registrar, and develops the wide range of general and basic skills in a range of specialties needed for practice in the specialty concerned.

3. *Higher specialist training*, usually as a Senior Registrar, is normally intended to last 3 to 5 years, at the end of which a doctor is regarded as having completed specialist training and as being ready to accept consultant (or equivalent) responsibilities. It is intended that a Senior Registrar should have two sessions (ie one day per week) of "protected time" for study.

4. *Vocational training for general practice* is the three year period of experience prescribed by the National Health Service (Vocational Training) Regulations 1979, or the period of experience accepted by the Joint Committee on Postgraduate Training for General Practice as equivalent to the prescribed experience. It is the equivalent of basic and higher specialist training for general practice.

5. Specialist training does not necessarily include a requirement to undergo *research training*, but most schemes allow for one or occasionally two years to be spent in research training. The MD is an unsupervised research degree, requiring only approval of title and outline at commencement and the acceptance of a final thesis; many doctors aspiring to a consultant post in a major hospital aim to complete an MD during specialist training, working in their own time. The minority of doctors aspiring to an academic career may take two or (usually) three years out of specialist training to work for a PhD, on a grant from the MRC or one of the major charities, or from the RHA (see Appendix 8). A small but growing number of doctors take one year (full-time) or two years (part-time) out of specialist training to take a taught MSc course in a health-related topic.

6. Basic medical education takes place in a university medical school, or one of the free-standing medical schools of the University of London (most of which are in the course of joining one or other of the multi-faculty colleges of the University), and its associated teaching hospitals. Undergraduate medical students are spending an increasing amount of time outside the major teaching hospitals, in peripheral district general hospitals, GP surgeries or the community. Specialist training takes place in all hospitals.

7. The BMA voiced to us dissatisfaction with four aspects of these arrangements (p406). First, they are unhappy with unsupervised MDs. "Doctors undertaking supervised research are more likely to be successful in their endeavours". They acknowledge that supervision would require "appropriate funding". Secondly, "protected time" is not in practice easy to protect; they propose that junior doctors' contracts should be, at least in part, with the Postgraduate Dean rather than the Trust. Thirdly, they would like all doctors to have protected time, not only senior registrars. Fourthly, they favour giving all undergraduate medical students the option of an intercalated BSc course, with an extra year for basic science and research methods (cp Q350).

Dental education

8. Undergraduate dental training, usually of five years, leads to the BDS and the right to unrestricted practice. Those aspiring to consultant status in a dental subspecialty (oral surgery, orthodontics etc) undertake a period of specialist training in some respects comparable to, but as yet less structured than, specialist training in medicine. This leads to higher qualifications such as FDS (comparable to FRCS), DDSc, or in some cases MSc or PhD.

Responsibility for specialist training

9. Responsibility for determining the content of specialist training, setting standards, and accreditation in the various specialties, rests in the case of each specialty with a joint committee bringing together the relevant Royal College, the specialist Association and representatives of the profession. The Colleges have networks of Regional representatives, who inspect training posts, assess trainees, and liaise at local level.

10. Responsibility for managing specialist training within the NHS rests with the Postgraduate Dean for each pre-1994 Region, who is in most cases under joint contract to the RHA and the local universities with medical schools. In respect of GP trainees, the Dean is assisted by regional advisers for general practice; in respect of hospital doctors, by the clinical tutor in each hospital. The Dean holds a budget for the direct costs of specialist training, and half the basic salary costs of all junior hospital doctors (but not GP trainees - Q365) - "to ensure that training arrangements are not unduly jeopardised by decisions based on short-term service considerations" (p356).

11. The Standing Committee on Postgraduate Medical and Dental Education (SCOPME) advises the Secretary of State for Health on the delivery of specialist training in England; Councils with similar titles and functions are in being for Scotland, Wales and Northern Ireland. Ultimate responsibility for standards of medical practice, and general oversight of medical education, and for co-ordination of all stages of medical education rests with the General Medical Council (GMC); the GMC maintains the Medical Register, and registers completion of specialist training on the advice of the higher training committees, currently by the indicator "T". The General Dental Council performs similar functions for dentistry.

12. Lady Cumberlege told the House on Second Reading of the Health Authorities Bill (*Hansard* 6 March 1995 cols 14, 71):

> "The postgraduate deans will continue to be responsible for commissioning postgraduate medical education and training, and for GP vocational training, working with regional advisers for general practice. In particular, we are proposing that the deans should be responsible for the educational contracts of junior doctors (registrars and senior registrars) so that important arrangements such as training rotations are protected. The deans form a vital link with the universities as well as holding substantial funds for training...They will work closely in both the NHS and the medical schools...I can reassure noble Lords that we are committed to a vital partnership between the universities and the new NHS".

13. It is envisaged that at least one Dean and one GP regional adviser will be located within each new regional office, under joint contract to universities and the NHS; "The Dean will be accountable for his budgetary and management responsibilities to the Regional Director" (p356). Detailed contractual arrangements for Postgraduate Deans and junior doctors are still under discussion; a discussion document, "Options for the future management of postgraduate medical and dental education", was issued in March.

The Calman report on specialist training for hospital doctors

14. In 1992, the EC Commission instituted infraction proceedings against the United Kingdom in respect of a series of Directives (75/362, 75/363, 82/76, 89/594) concerning mutual recognition of medical qualifications. The principal point at issue was the duration of specialist training: the Directives prescribe minimum periods of 3-5 years, depending on the specialty (average 4 years), but the minimum periods allowed by the various medical Royal Colleges range from 5 to 9 years (average 6.2 years). In response, the Secretary of State set up a Working Group on Specialist Medical Training, chaired by the Chief Medical Officer (CMO), Dr Kenneth Calman; their report, "Hospital Doctors: Training for the Future", was made in April 1993, and accepted by the Government in December.

15. The Group found that there was general agreement that specialist training in the UK went on too long, and that the Colleges were already moving towards shorter and more structured training. They recommended that structured training, lasting no longer than 7 years, should be in place by the end of 1995. In accordance with the Directives, a new UK Certificate of Completion of Specialist Training (CCST) should be awarded by the GMC, on the advice of the relevant College (in place of the current "T" indicator in the register); the CCST would render the holder eligible for

appointment as a consultant. To make structured training easier to organise, they recommended merging the grades of registrar and senior registrar into a new unified higher training grade.

16. The Group recognised that shorter specialist training would create a need for more NHS consultant posts, both to do some of the work currently done by registrars and senior registrars, and to create opportunities for the increased numbers completing training. They also noted that "proper account must be taken of the special needs of trainees aiming at careers in academic medicine, together with a need for flexibility to ensure that the interests of academic and research bodies in medicine are properly protected".

17. The Joint Planning Advisory Committee (JPAC) then set up an Academic and Research Working Party; in January 1994 they produced a report, "Numbering trainees, programmes and posts: a national strategy to support manpower planning, postgraduate education and research within the NHS". They recommended that admission to the unified training grade for higher specialist training should be conditional on possession of a national training number (NTN). The NHS would maintain a quota of NTNs for each Region and specialty, and would allocate them on advice from regional appointments committees involving the Royal Colleges, the postgraduate dean and local universities and NHS employers. The system would be flexible enough to permit trainees to move around the UK (or overseas) and to change career pathway; and trainees undertaking research would be specifically monitored. (JPAC is now to be succeeded by the Specialist Workforce Advisory Group to a new body, the Advisory Group on Medical and Dental Education, Training and Staffing (AGMETS). See pp363 and 385.

18. The proposal for NTNs was taken forward by the NTN Implementation Steering Committee, who in June 1994 produced "Guidance on introducing National Training, Post and Programme Numbers". This repeated that the system should accommodate trainees holding academic and research appointments. However it sounded a warning note:

> "All components of the NTN should be set at entry to higher specialist training and should not change unless the trainee changes specialty or elects to move to a programme under another Dean. Changing an NTN should not be undertaken lightly since, once relinquished, there is no automatic reallocation just because the trainee moves to a new specialty or a new area. He/she would have to compete for a place on a new training programme and a new NTN; if the Dean had no number available in the specialty chosen the trainee would face real difficulties. This is why mobility is heavily weighted to the trainee retaining the NTN wherever he/she moves provided the parent Dean is agreeable and the trainee continues to pursue training consistent with the NTN specialty he/she holds (or otherwise seeks a break, eg for research). The NTN returns to the parent Dean once it is relinquished".

19. In April 1994 the Government set up a Unified Training Grade Working Party. They reported in December 1994. They recommended that the unified grade be known as "Specialist Registrar", and recommended a framework of principles and transitional arrangements. With regard to research and the numbers in training, they said, "Time out for research should be allowed. This should not involve loss of the NTN and it should be possible for all specialties to make a reasonable assessment of the number of trainees likely to be engaged in research at any one time and to build that prospectively into programmes". Welcoming their report (DH Press Release 95/22), the Department of Health announced that the new grade would be launched nationally, specialty by specialty, and that the first Specialist Registrars would be in post by the end of 1995.

20. Following these reports, a Working Group chaired by the CMO was commissioned to consider the implications for academic and research medicine arising from the Calman report. Its report is expected shortly.

21. Among our witnesses, the Government's own OST has expressed concern to see that shorter training time "has no detrimental effect on the number and quality of medical researchers with dual [clinical and scientific] qualifications" (p458), which it sees as one of the strengths of British medical research. SCOPME, the Government's advisory body on postgraduate medical and dental education in England, is also concerned (p469): research skills linked to clinical medicine are generally inadequate as it is; recent recommendations from the GMC on undergraduate medical education ("Doctors of the Future", December 1993) call for a stronger link between clinical medicine and basic science; yet the Calman proposals "may have a major impact on the availability of research experience to doctors and dentists in hospital training. Potentially, this could have a significant effect on participation of the training grades in research projects and their acquiring an

awareness of the need for a strong research base for the NHS...The extent to which research experience during training influences how willingly clinicians take on board R&D findings in their career-long clinical practice needs further enquiry. The same applies to identifying the best ways of providing this research experience". The Royal Society of Edinburgh made the same point (p314).

22. Dr Kendell, the Scottish CMO, believes that these concerns merely manifest fear of the unknown. By shortening specialist training, the new system may make research easier. "Much in practice will depend on the attitudes of the Colleges and of the Postgraduate Deans" (Q1145). His colleague Professor Bouchier is not so confident (Q1148); he fears a sharp drop in the number of consultants with experience of research, which "augurs poorly for the future of health services research, in particular clinical trials".

23. Professor John Swales, on the contrary, anticipates that the new system will mean that all junior doctors will do a period of research training, and he welcomes this (Q840). His concern is that the number of consultants will not be increased sufficiently to take up the burden of clinical services no longer being performed by doctors in training, and that research will suffer in consequence. Professor MacKie made the same point (Q1071). On the other hand the HEFCs (QQ1360-62) are concerned that the number of consultants *will* increase, and diminish the influence of clinical academics over the culture of the teaching hospital and the wider NHS. They want training numbers to be "liberally" available to junior doctors opting for research. Professor Stout of Belfast (Q717) hopes that some of the new consultant posts will be academic. Similarly the CDMS expect the new system to mean fewer junior doctors on academic units, with less time for research (p462); they say, "It is essential that funds are found either from NHS or HEFCE sources to match the increase of NHS consultants with additional senior lecturer posts so that the staffing levels on clinical academic units can be maintained".

24. The Association of Young Medical Scientists, a new organisation aspiring to represent clinical and non-clinical research fellows, is concerned for the flexibility of the system (p319). The Calman proposals fail to recognise that "a research training cannot simply be added on to a clinical training, but is part of a training that leads an individual into a different role and career structure". AYMS does not agree that every junior doctor benefits from a taste of research; in their view, poor-quality research done by people whose future careers do not demand it will have "detrimental effects on future perceptions of the research community". This is not however the view of the higher training committees, which consider that some involvement in, or exposure to, research is a fundamental part of the training of all specialists, whether destined for an academic career or not.

25. The Arthritis and Rheumatism Council (p413) considers that the new system "may have a very damaging effect on the NHS R&D effort". Fewer registrars will mean more clinical work for consultants, including academic consultants; the ARC suggests that, in default of new money from the HEFCs, the NHS might use some of the money saved on registrars' salaries to pay for some new senior lectureships. Junior doctors who work the new system by doing their PhD before embarking on the new, more intense specialist training may find after five years of full-time clinical work that they cannot get back into research. Doctors who do their PhD in the middle of their specialist training will, if allowed to take their training number with them, leave the more academic specialties cluttered with visiting registrars from overseas; if they have to surrender the number to another trainee, they may have difficulty getting it back in order to complete training and earn their CCST. Either way, the new system will produce a "training time penalty" for aspiring clinical academics of 2-3 years. The BMA (p407, Q1376) are similarly concerned that junior doctors "will come under significant pressure not to step outside the [unified training] grade in order to pursue academic, including research, interests". While they prefer junior doctors to "follow their bent" rather than conduct research by obligation, they do not wish time spent in research to count against the researcher. Sir Leslie Turnberg is President of one of the Colleges and Chairman of the Conference which brings them all together; his concern (QQ889, 892) is not for flexibility, since "most programmes encourage periods of time out" and the numbering system will permit this, but for the disincentive effect of the time penalty, and for the position of the home department while the trainee is away. Professor Wyllie takes the same line (Q1085); Professor Edwards is likewise concerned about the position of the home department (Q999).

26. When we met Dr Graham Winyard, NHS Director of Health Care, in February, he said (Q590):

> "Most of the Colleges are recognising up to one year of research, and that year need not include clinical work, as part of the programme leading to the CCST; but I think more

> importantly the approach that we will be taking to workforce planning will be a much more flexible one and there will not be difficulties about quotas, so that when people want to diverge from the higher specialist training programme to do a longer period in a research post, they will be able to do that and come back in without detriment and without having to jump through bureaucratic hoops".

27. The Royal Society of Edinburgh comment (p315), "It is important to establish whether or not this time out will be funded by the NHS, or whether individuals who wish to take this time out will have to acquire their own funding from competitive research grants. If the latter is the case, the possibility of a low uptake and consequently a more narrow career training for junior clinical staff would be an unfortunate outcome".

The contractual position: clinical academics

28. According to the Department of Health (p12), "Clinical academic staff are university employees but they have honorary NHS contracts which allow them access to patients for teaching, research and service purposes. Employers are encouraged to recognise the particular needs and responsibilities of these staff. Employers should be prepared to allow more flexibility in the way in which NHS commitments are fulfilled by members of academic departments, for example for the purpose of a research programme. The number of fixed NHS commitments should be agreed by the consultant and the general manager in consultation with the medical school dean or head of the academic department in the context of the overall commitments of university staff".

29. In its second report (June 1990), SGUMDER proposed that health authorities with teaching hospitals should agree with their medical schools a tightly defined package of clinical service commitments, to be delivered by clinical academics holding honorary NHS consultant contracts under the management of the heads of university departments in consultation with NHS managers, leaving it up to the head of department to decide who did what. This was accepted by the Secretaries of State for Education and Health, and according to the UFC Medical Committee (1st Report, March 1991) "has proved most valuable" (cp HEFCs Q1356).

30. The UFC Committee reported that "progress with the preparation of contracts and job plans is variable across the UK". Some health authorities and medical schools had made flexible agreements as proposed by SGUMDER. Others, however, apparently unaware of the SGUMDER proposals, had made less flexible contracts; the Committee encouraged them to "reconsider the matter".

31. The UFC Committee found that many clinical academics are giving much more time to NHS duties than the expected average of six sessions. (A session is one notional half-day per week; NHS consultants are normally contracted for ten sessions.) This is due to "the growing volume and/or complexity of clinical work", and "the new demands for greater involvement of senior clinical staff in management and medical audit". In some cases, honorary consultants appeared to have no time for research or teaching at all.

32. Senior clinical academics move more often than NHS consultants, and the UFC Committee found evidence that NHS managers were resisting such mobility. They commented, "Turnover and renewal is an essential element in the vitality of academic departments and, despite the problems it may cause, it is in everyone's interest not to hinder it".

33. A year later (2nd Report, March 1992), the UFC Committee found, "The position in respect of job plans was, in general, satisfactory". The arrangements for most honorary consultants were of the flexible sort envisaged by SGUMDER. However, they reiterated their concern about clinical academics spending too much time - in some cases a third of their academic time - on service work or management. "The greatest pressures are concentrated in relatively few medical schools, but in those schools research is suffering and the level of teaching must deteriorate, if it has not already done so". In some cases over-commitment was historically determined or self-imposed; in others it was simply due to the pressure of clinical services. One consequence was to reduce flexibility within the medical school, eg to replace one clinical academic with another with different research interests.

Salaries of clinical academic staff

34. The average clinical academic salary is £40,000+, according to the CVCP. Clinical academic salaries amounted to £252m in 1992-93, or 8 per cent of the academic pay bill for the whole UK.

35. The BMA explained to us that, since 1968, as a matter of practice, clinical academic staff with honorary NHS contracts have been paid by the university on the same scale as NHS staff of the equivalent grade (Q1379), in recognition of the fact that unlike all other academics their teaching and research work is dependent upon and inseparable from a full service commitment to the NHS. What clinical academics are paid is up to the university as employer, not the HEFC (HEFCs Q1364). However the principle of parity has been consistently vitiated by delay between the reports of the Review Body on Doctors' and Dentists' Remuneration (DDRB) and conclusion of negotiations with all other academic staff; and the line will become harder to hold as NHS pay is delegated to provider (Trust) level and starts to diverge.

36. The 24th Report of the DDRB (Cm 2760), which the Government has accepted in full as announced on 9 February, proposed "a modest development of local pay for hospital consultants...in 1995-96 where the local parties are willing and able to take advantage of the opportunity". This proposal was described as transitional, and the Review Body "reserve the right to revert exclusively to old style 'national recommendations' in the next two years if the monitoring of settlements provides us with cause for concern".

Table 9: Equivalent grades in NHS and university

NHS	University: tenured	University: non-tenured
Consultant	Professor Reader Senior Lecturer	Principal Research Associate
Senior Registrar Registrar	Lecturer	Senior Research Associate Research Associate

37. With respect to clinical academics, the Review Body commented:

> "Those with responsibility for determining the remuneration of clinical academics with NHS responsibilities customarily take note of what we have recommended for doctors and dentists in the NHS. The professions have expressed their concern to us about how developments on local pay determination would bear on clinical academics, commenting that some of those concerned have two contracts to fulfil (one with a university and one with the NHS). Clinical academics have an important role to play within the NHS and we have commented in previous reports that delays in "translating" pay awards to them have caused considerable grievance. We urge the employers to ensure that their clinical academic staff suffer no disadvantage in relation to their medical colleagues during either the transition to or the full implementation of local pay arrangements".

38. It appears (BMJ 11 March 1995 p674) that, as a result of opposition from the professions, the DDRB's proposals for local pay will not be adopted in respect of consultants on national terms and conditions of service. Consultants on local contracts (at present a small minority) may already agree to depart from the national scale.

Distinction Awards: the Kendell report

39. NHS consultants are usually appointed in their 30s, and remain consultants until retirement. The consultant salary scale for 1995-96 ranges from £40,620 to £52,440. To improve motivation, to compensate for the absence of promotion prospects, and to balance the attractions of private practice, the NHS offers medical and dental consultants Distinction Awards at four levels.

Table 10: Distinction Awards, April 1995

Grade	Value	Number
A+	£49,820	250
A	£36,710	861
B	£20,975	1,910
C	£10,490	4,377

40. Distinction Awards are especially important to academic honorary consultants, since the opportunities to combine a clinical academic career with private practice are restricted. "Most universities now allow limited private practice on condition that the funds gained thereby by the individual are reflected back in some way into the funds of the medical school, so that it does not all go into the person's private pocket" (CVCP, Q170).

41. On 31 December 1993, 7,103 consultants held awards out of some 20,000. The cost of the scheme for 1993-94 was about £104m; awards are paid by the employer of the consultant, usually now a Trust, as a pensionable part of salary.

42. The current criteria for awards are as follows:

- clinical excellence and leadership;
- research, innovation and improvement, subject to opportunity;
- outstanding administrative or management effort, subject to opportunity and normal expectations - "There will be exceptions for honorary NHS contract holders...whose duties include a smaller management content";
- teaching and training, "especially if undertaken in addition to ordinary duties";
- "having borne the heat and burden of the day" - this criterion does not apply above B level;
- "For the small number of awards available at A and A+ level, a very high standard is inevitably required. Awards might be recommended for those who are evident leaders in a clinical or scientific field, including those with special skills, those who contribute new ideas of proven worth, those who are generally accepted as leaders of their profession in their region and the country as a whole and those with a national or international reputation".

43. Awards are available to consultants employed by a Health Authority or Trust. Academic honorary consultants are eligible provided they devote an assessable amount of time (actual, not contractual) to NHS clinical work; those who do less than 21 hours (roughly half a week) of clinical work per week, on average, receive a proportionally reduced award. For this purpose, "clinical research which can be specifically related to the diagnosis or treatment of individual patients at the hospital" (HM(54)109) counts as clinical work.

44. GP principals, the general practice equivalent of consultants, are not eligible for awards. See Appendix 10.

45. The Distinction Award system has remained unchanged in its essentials since it was established in 1948. Awards are made on the advice of a national Advisory Committee on Distinction Awards (ACDA), composed largely of consultants, but with a lay vice-chairman and representation for the universities, the MRC and (since 1990) the NHSME. The proportion of eligible consultants intended to be in receipt of each grade of award at any one time is fixed (C 20 per cent, B 10 per cent, A 4 per cent, A+ 1 per cent). Regional Committees nominate for C awards; nominations for B and A awards are passed through regional Higher Awards Committees; A+ awards are handled directly by the ACDA.

46. Discontent with the scheme was first voiced by the Review Body on Doctors' and Dentists' Remuneration in 1988. This led to changes in 1990, particularly in relation to C awards: RHA Chairman were placed in the chair of the regional committees, and the criteria for award were expanded to include commitment to the management and development of the NHS. However discontent continued to be expressed, by NHS managers and the DDRB, until in 1993 the Government set up a Working Party to review the scheme, chaired by Dr Robert Kendell, Chief Medical Officer in Scotland. Their report was published in October 1994.

47. The Working Party found "that, on the whole, the system is fair and that merit is rewarded", and that it "has a powerful and beneficial effect on consultant motivation". Their recommendations therefore set out to improve the system and to bring it into line with the reformed NHS, but not to supplant it or water it down. They made numerous recommendations; only those of particular relevance to academic medicine and dentistry are noted here.

48. The Working Party recommended a new distinction within the scheme, between local awards and national awards. "Local awards should be a means of rewarding outstanding professional work of direct benefit to patient care in the local hospital or community; national awards should be a means of rewarding outstanding professional work of wider benefit to patients in the NHS as a whole". Local awards would continue to be paid by the employer; but national awards would be paid at national level. This would remove the current financial disincentive against Trusts either encouraging their consultants to aim for national distinction, or employing consultants who already hold a higher award. At least to begin with, C awards would become local awards, and the higher awards would become national awards. "Progression to a national award should normally, but not invariably, be conditional on the holding of a local award". The value and total number of awards would continue to be a question for the DDRB.

49. Nomination for national awards would be handled by the ACDA and Regional Sub-Committees based on the Higher Award Committees. The chair of each Sub-Committee would be taken by a representative of the employers - the Government had already announced that the same would apply to the ACDA - and employer representation on both the ACDA and the Sub-Committees would rise to 25 per cent. Anyone can make a nomination for a Distinction Award; but the Working Party drew up a list of those who should be expressly invited to nominate to the Sub-Committees for national awards; it includes the RDRD, the Postgraduate Dean, and local universities with medical or dental schools.

50. The Working Party admitted that devising a devolved system for local awards which retained an element of peer review and did not allow employers to reduce substantially the number of awards on offer, either immediately or over time, was not easy. They recommended that local awards be at the disposal of a new series of Local Awards Committees, each covering the employers within an area serving 1-2 million people. Each Committee would represent all the local employers, up to a maximum of 40 per cent of the total membership; the rest would represent the professions. The chairman would be an employer.

51. The right to nominate for local awards would be restricted to the employer of the consultant concerned. In the case of an academic honorary consultant, this would be the body issuing the honorary contract, not the university. For the first year, each Committee would dispose of as many awards as the C awards then held by its consultants; over the following 5 years, each Committee's quota of awards would be brought into a uniform relation to the number of its consultants. ACDA's role in respect of local awards would be limited to monitoring and advice.

52. The Working Party recommended that, for honorary consultants, work counted for the purposes of Distinction Awards should include managerial work, postgraduate teaching and clinical audit, as well as clinical work. "With some reluctance" they decided not to recommend that eligibility for awards be extended to GPs employed by university departments of general practice. "If a clinician who already holds an award becomes Dean of his or her [medical or dental] School, the Working Party expects that the NHS employer with whom their [honorary] clinical contract is held would not reduce their award if their clinical sessions had to be temporarily reduced as a result".

53. When the Kendell report was published, the Government announced that the current arrangements for Distinction Awards will run only until March 1996. New arrangements are now being negotiated between the Government and the BMA and BDA. The DDRB broadly welcomed the proposals of the Kendell report, adding only that, for the sake of simplicity, "We invite evidence from the parties to our next review as to how "C" awards and notional half day payments could be incorporated into locally determined salaries".

54. On 11 March, the BMJ reported that the negotiators had moved some way from the Kendell proposals, partly in search of a form of local pay in place of the abandoned proposals of the DDRB (see above). What was then under discussion was, in place of C awards, a national scale of increments, to be awarded at the employer's discretion subject to national criteria and guidelines. Increments would be available more widely than C awards, but would continue to be awarded on merit, not mere seniority.

55. Whether the outcome will affect research will depend on whether a consultant whose distinction rests on his contribution to national research, rather than local service, will stand less chance than at present of achieving a C award or equivalent. It seems likely that the outcome will in some way place these awards in the hands of the local employer or Trust. Professor Swales comments (Q841), "In some teaching hospitals the role of research is recognised fully...but this may

not be true everywhere". Dr Kendell himself acknowledges, "I think it is inescapable that the emphasis on research would have been somewhat diluted, simply because there was bound to be an increased emphasis on management skills...We recommended a loophole whereby it was not necessary to have a C award before getting a B award...but we envisaged that this would be fairly infrequent" (Q1143).

Clinical academic posts funded by the NHS

56. The salaries of 577 full-time equivalent clinical academic staff in England are now paid by RHAs by top-slicing their allocations, at an annual total cost of £21m (Q587). Some DHAs also support academic posts, as do some Trusts (QQ842, 1270). The proportion of posts supported in this way varies widely from university to university, between about one in five and three in five (p79, Q129).

57. Sir Colin Dollery (Q135, cp p73) explained to us that this situation has arisen in two ways. First, the capping of UGC funds in the mid-80s caused a reduction of one fifth in the number of clinical academics paid for out of block grant; "the health service moved in to the rescue and created large numbers of senior lecturer posts to fill that gap". (The number of full-time clinical teaching staff funded wholly by the universities fell from 2,636 in 1980-81 to 2,088 in 1986-87, while those funded partly or wholly from other sources - the MRC, the major charities or the NHS - rose from 444 to 1,215: First (Interim) Report of SGUMDER, June 1989, Table 3.) Secondly, the RHAs have come to see creating an academic post as an effective way to develop services and raise standards in the specialty in question (QQ890, 1292). The Chief Executive of Cambridgeshire and Huntingdon Health Commission told us (Q954), "The case in Cambridge is that this mechanism has been used very effectively to bring about increased investments in areas where there has been a need dramatically to improve clinical practice, and the whole input of an academic perspective and investment through the clinical school has dramatically raised standards over a period of years".

58. In principle an academic whose salary is paid by the NHS is in the same position as one whose salary is borne by the university. In practice this is not always the case, since NHS-funded academics may face extra pressure to give time to clinical services (QQ844, 895), and may lack the necessary underpinning, eg laboratory space and secretarial support (Q1076).

59. The impending abolition of the RHAs appears to place these posts in jeopardy. (The changes to SIFTR are also perceived as a threat, eg Q887; but SIFTR is a general subsidy to teaching hospitals, and not the source of specific funding for the posts referred to here.) We put this to Professor Peckham in November 1994 (Q21); he said, "There will clearly need to be a solution, but some of this may be a call on the R&D budget, some may be more appropriately covered by the teaching funding stream, and some of this may need to be covered from non-research, non-teaching NHS sources".

60. By the time we met officers of the NHS Executive in February, thinking on this question had advanced (Q587):

> "The basic principle that we would like to establish is the intention to honour those commitments...This is because the NHS Executive values very highly the work done and the collaboration required and needed and achieved in the past with the universities. We have given some consideration as well to the mechanism and whereas we believe that much of the funding could be devolved to local level, and indeed would be as the result of an agreement reached between individual trusts and their DHA purchasers, this would be primarily in respect of those areas which relate to local service provision. But we do believe that certain academic posts relate to areas which have a supra-district or even a national impact, and indeed I think teaching and research and development fits within that criterion, so at this stage our recommendation to the NHS Executive Board would be again that all districts should contribute to the levies for teaching and research from 1 April 1996 in respect of those academic posts...I think in the future the investment might come from either of the two levies and that would be for work appropriate to a national basis for teaching and research, but also from purchasers getting together and acknowledging, as many have already done, that some service needs are best tackled through investment in academic departments and agreeing locally to provide them".

61. We met Professor Peckham again in March 1995, and he remained reassuring. "I do not think there is any intention to stop such appointments, which can continue to be made in appropriate

circumstances, and the funding arrangements for research and indeed for education will be there to fund clinical academic posts when the case can be made" (QQ1271, 1293).

62. The HEFCs too see no cause for alarm. Some medical schools, particularly the newer ones without endowments to fall back on, are arguably over-dependent on the NHS; but so far there has been no "flight of resources".

63. The Department of Health subsequently told us in writing (p369), "The NHS Executive Board has agreed that financial provision from 1996-97 for these posts will be met by local purchasers or from one of the proposed national levies, as determined by Regions. It is expected that guidance on this matter will be issued to the NHS shortly". The CDMS remains concerned that "random decisions of NHS purchasers may threaten this support" (p462).

64. The same issue arises in Scotland, where around 80 consultant-level posts and around 20 lectureships (around 10 per cent of all clinical academic posts) are funded by the NHS (Q1142), largely on local initiative. The CMO is not certain what is the future of these arrangements, but comments, "So far there is no hint at all that Trusts are anti-academic".

The contractual position: NHS staff

65. According to the Department of Health (p11), "All NHS consultants employed on the national terms and conditions of service must have a job plan agreed with the general manager responsible for the day-to-day management of their contracts. The job plan must include the main duties and responsibilities and a schedule of the fixed commitments of the post, including information on the clinical, teaching, research and administrative elements. Contracts are drawn up between the employer and employee and it is for them to reach mutual agreement".

66. In March 1992, the UFC Medical Committee reported that most NHS consultants in teaching hospitals were committed by their job plans to one teaching session.

Clinical scientists

67. There are over 2000 scientists without medical qualifications working in the NHS in clinical departments, and making an increasingly important contribution to the work of the NHS: see Table 11.

Table 11: NHS clinical scientists 1993-94

Clinical biochemistry	604
Medical physics, clinical engineering	871
Clinical cytogenetics	271
Molecular genetics	71
Medical microbiology	99
Audiology	101
Histocompatibility, immunogenetics	38
Clinical immunology	79
Blood transfusion, haemostasis	50
TOTAL	2184

Source: CSTI, p440.

APPENDIX 6

The R&D Strategy: Opinions of witnesses

Health services research and biomedical research

1. The Strategy is perceived in some quarters to be concerned more with health services research than with biomedical research (CDMS p73, Q140, RAEng p459, AYMS p319, RSE p313, CSTI p438, ARC p412). AYMS proposes "careful, independent assessment...to maintain the correct balance". The Royal Society of Edinburgh compare the English Strategy favourably in this respect with the Scottish Strategy; however they too warn that "not all research carried out in the NHS is health services research". Professor Andrew Wyllie FRSE added when we met him (QQ1036, 1068) that health services research can only "measure the situation as it is at present - you need just one major advance and the whole of the equation is changed"; also, in the rapidly-emerging field of genetic screening, the distinction between biomedical and health services research is no help to those facing the significant resource implications. The Royal Academy of Engineering, while endorsing the "vital role of health services research in determining what new technologies should be adopted and the optimal allocation of resources for health care delivery", declares that "only the results of biomedical research can lead to change in health technology and consequently to improvement in the health of the nation"; they call for new money to support the expansion of health services research, as does Dr Malcolm Green (p213).

2. Sir Leslie Turnberg, speaking for the Conference of Medical Royal Colleges, echoed the call for balance, and for more money (QQ880-884). "There is not as much health services research, I suspect, as we would like to see". But "we do have to see some effectiveness demonstrated for the input thus far"; and biomedical research, which can itself lead directly to savings for the NHS, must not be damaged in the mean time. Dame Margaret Turner-Warwick, whom we met on the same day representing NAHAT, took precisely the same line (Q945): "Health services research...is a very important stress of Mike Peckham's initiative, but...the strength of British research and the NHS have been applying those basic ideas to clinical medicine and hence the implications for therapy. If we ignore that in our effort to improve health services research, I think we shall have done great long-term damage".

3. Professor Peckham (Q1, p382) told us that he saw no conflict between clinical research and health services research, and wished to develop both. His near-opposite number for Scotland, Professor Bouchier, takes a similar line (Q1100): "I see this in the end being a balance, with a shifting line between the two depending...on the quality of applications". Sir Dai Rees considers that those who would set up a conflict between science-led biomedical research and needs-led health services research are victims of a "national disease" of divorcing science from its applications (Q80). According to Professor Culyer, "It is invidious to draw distinctions between basic scientific research and clinical research and health services research. The whole thing is best seen as a seamless robe, as a continuum, in which there is ongoing interaction" (Q536).

4. As Dr Green sees it, there is a conflict, and it is simply for limited resources. "There will be ever-increasing calls on the R&D funds for research into new areas, and in new ways. Examples may include research into complementary medicine, into the dissemination and implementation process, into the social aspects of health, the politics of health etc. Each of these is maybe highly appropriate, but it would be a tragedy if continual identification of new priorities led to the progressive demise of biomedical and clinical research" (p212). Professor Robert Boyd, another member of the Task Force, made the same point (p180, Q527), and gave examples from the old North Western Region of biomedical infrastructure funding withdrawn and redirected into health services research (Q544, p182). He calls for new money.

5. The MRC is also expanding its activities in health services research (Appendix 4 paragraph 48). On the face of it, this is in conflict with the model offered to us by Dr Peter Doyle, a former member of the MRC (Q827): he sees the MRC and the charities funding basic research, and the NHS funding "a downstream component which will support the fruits of it".

6. It might be, of course, that UK biomedical research is currently over-resourced; but our evidence suggests not. According to the MRC (p455), "It is too soon to be able to say what proportion of alpha rated proposals the MRC will be unable to fund for lack of resources in the 1994-95 session. However it is already clear that this is going to be a difficult year financially and therefore the proportion of alpha rated proposals that we will have to decline is likely to be significant and higher than in previous years". According to the annual report of the Wellcome Trust 1994, "Demand for project grant funding has continued to put pressure on this element of the Trust's budget, and

consequently the awarding rates by number and cost of award have continued to decline". The phenomenon of the "unfunded alpha" suggests that an increasing amount of potentially excellent UK biomedical research is not being done for lack of funding.

7. Corroborative evidence, drawn to our attention by Professor John Swales (Q842), is provided by the Institute for Scientific Information, in an article based on an index of citations and published in 1992 (*Science Watch* vol.3, no.6). "While it is true that clinical reports by British physician-scientists are still earning about 21 per cent more citations than the world average, this is down sharply from 33 per cent more than the world average in 1981-85 and from 30 per cent more than the world as recently as 1985-89". Some specialties scored better than others; but "every clinical specialty but four lost ground in relative terms from 1981-85 to 1987-91".

8. Dr Doyle of Zeneca (Q822) considers that funding for basic research is "a potential black hole", and that "in the quality of our medical research and biological research in general we probably do very well considering the size of the country". However he points to the current high level of scientific opportunity in fields such as genetic research and cell biology: "The opportunity to invest in basic research with an objective at the end of it has never been more exciting and attractive". Professor John Swales, commenting on the same phenomenon, observes, "Clinical research on the patient has assumed greater rather than less importance as a result of the success of biomedical science" (p253, cp Q839).

Regional Directors of R&D

9. The CVCP (Q159) accept that the RDRDs will have to become full-time officers; but according to the Deans (p80), including Professor Swales (p255, Q863) full-time RDRDs will have less credibility than the Professors who have done the job part-time until now. Sir Leslie Turnberg sees the RDRDs as "key figures" (QQ901-8), whose credibility in the research community will be crucial. He hopes that they will not "move from being true-blue academics into being managers of research activity and primarily civil servants". He would like them to be appointed by "a committee that involved strong university and academic representation", and to work part-time, retaining "a foothold in the academic camp". The HEFCs' Joint Medical Advisory Committee (JMAC), in its recent report, recommends that "consideration should be given to introducing an element of accountability to universities in the post of RDRD, including the involvement of universities in the appointment process" (p395).

10. Professor Peckham assures us (Q1288) that the universities were involved in the new appointments made in 1994: Sir Michael Thompson (Vice-Chancellor, Birmingham University) served as an external assessor, along with Sir Leslie Turnberg (p383). Professor Peckham comments, "RDRDs must enjoy the confidence of the research community. They must also enjoy the confidence of NHS medical and non-medical staff, public health physicians, managers, patients and the public. This is essentially a new role for the research community".

11. Professor Alberti is a part-time RDRD supported by an Associate. He believes that his being an "only gently downhill-moving academic" lends credibility to his work (Q1271). He favours this model, or that of a full-time RDRD on secondment. Professor Peckham agrees that both these models are acceptable, but insists, "There is a full-time job to be done".

12. Professor Peckham spoke in November 1994 in terms of a "balance", as yet undecided, between the roles of the RDRDs and the centre after the abolition of the RHAs in April 1996 (QQ1, 15, 21). The ABPI wants the RDRDs to enjoy "stability and security" through the change in regional organisation (p246). Dr Doyle (Q826) warns, "You certainly cannot spend all the hopefully 1.5 per cent from the centre"; he hopes that the CRDC will provide a "clear central strategy", but leave the RDRDs to implement it, "so that some of the tributaries [of the single stream] actually do get to the sea and do not dry up into a delta". Professor Prys-Roberts (Q885) makes the simple point that the new regions for which the eight RDRDs are responsible are very big: "one finds it difficult to see how they can function without being subdivided". Sir Christopher Paine is similarly concerned (Q899) for the capacity of the new big regions to be "sufficiently sensitive, particularly to the curiosity-driven research...and to the small health services research projects". He is afraid that the new system will perforce be distant, bureaucratic and slow.

13. Professor Alberti, Northern and Yorkshire RDRD, considers (Q1269) that the new arrangements "will strengthen our role...We will have a major role in the regional office, and that has already emerged in Yorkshire, and we are given a free hand to get on with putting R&D on the map in the region". Professor Peckham agrees (p383): "R&D has emerged...considerably

strengthened. It is a core function of regional offices, in which the RDRD is a member of the senior executive team. RDRDs therefore have the authority and resources to develop and sustain a long-term view as well as to deliver on short-term issues".

14. "Individual Regions vary a lot, depending often on who their R&D Director is" (RCGP Q398).The CVCP (Q172) argued for the autonomy of the RDRDs to be constrained by principles applied nationwide, particularly in the context of infrastructure funding. The AUDGP report (p428) that the level of commitment to primary care research varies with "the preoccupation of individual RDRDs". Dr Pam Enderby says the same of their relations with the therapy professions (Q1304), though Dr Jean Potts (Q1319) gave examples of good practice from Northern and Yorkshire Region. The RCN reports with satisfaction that most Regional R&D Committees have at least one nurse member (p329). The Deans of Dental Schools and the British Dental Association are dissatisfied with the dental input to the Strategy at Regional and indeed national level (Q324, p107, p433).

15. Dr Green (p211), noting that the creation of a single funding stream for NHS R&D following the Culyer report will increase the power of the RDRDs, concludes that the incumbents should be people of the highest quality, with experience of research and research strategy; that the universities, the MRC and the charities should be involved in appointing them; and that the CRDC and the Forum will have a role as "checks and balances". He suggests "formalised mechanisms by which one or other or both of these can express its views to Ministers directly if necessary, as a fail-safe mechanism".

16. From Scotland, where there are no equivalents to the Regional Directors, the Royal Society of Edinburgh expresses envy (p314): "An early impression of the new situation in England and Wales is that this is advantageous to the biomedical community and to the facilitating of research projects. Many of those working in Scotland would like to see consideration given to more local activity and the appointment of regional director equivalents for R&D".

Responsive funding

17. The Strategy is to some extent directed from above, by the national priorities set by the CRDC and the regional plans drawn up by the Regional Directors of R&D; but every RHA offers responsive project funding through some form of successor to the LORS, which ceased to be the subject of guidance from the centre in 1991. "Traditionally, many Regional locally-organised research schemes provided funding for biomedical research, often propelling newcomers to the research field into a lifetime of productive research activity" (RAEng, p459). The balance of commissioned health services research to responsive funding is typically 3-4:1; Trent is exceptional, in deliberately setting equal budgets for the two modes. Trent has put more money into LORS, whereas West Midlands is putting substantially less; the trend in other Regions is not apparent from the plans which we have seen. The criteria for funding are not uniform: some Regions appear to have regard to scientific quality alone, but West Midlands intends to relate responsive funding to its priority areas; North West and South Thames, without being prescriptive, will respect criteria of relevance; and North Thames will fund only "applied health services research", to the exclusion of biomedical projects with no clear application to the NHS. See Appendix 8.

18. The AMRC, the RSE (p286) and SHERT (p286) express concern that the Culyer report will give even greater weight to the CRDC's priorities. The Conference of Medical Royal Colleges (p272, Q884) urges that "a LORS function [ie responsive funding at regional level] is maintained within the R&D structure, perhaps as a Sub-Committee, for the assessment and award of grants to support good ideas coming to it from the NHS". The AUDGP feels (p428) that the approach has been too top-down, and "has concerns about the balance between central control and peripheral ownership, with obvious implications, for commitment to the strategy". The Royal Society of Edinburgh points to the "vital importance" of research which is "not goal-directed, but curiosity-driven" (p286). The Association of British HealthCare Industries (ABHI) (p414) express similar concern, that over-direction will "stop small but highly productive research projects from starting, and could make other useful programmes too large and academically rigorous", thereby reducing motivation, diversity and the capacity to innovate.

19. Sir Leslie Turnberg and Sir Christopher Paine (QQ900, 905), speaking for the Conference of Medical Royal Colleges, call for balance: "There was nothing at the top before, and perhaps it is just as well there is something there, but on the other hand there is a risk...we set out with a good intent and ensnare ourselves in a bureaucracy"..."There has to be a route to the RDRDs and to the

committee for ideas to be submitted, rather than expect the central committee at regional level to produce all the R&D itself". NAHAT too is concerned to avoid "an over-centralised approach to R&D" (Q923).

20. Professor Peckham told us that the Strategy includes "bottom-up" elements, and is intended to complement curiosity-driven research, not to limit it (Q29); and that there will continue to be provision for pre-protocol research (Q14) and responsive funding at regional level (Q21; pp8, 382).

"Hearts and minds"

21. According to Dr Malcolm Green (p209), the biggest challenge of the next phase of the R&D Strategy is communication. The aspiration of a knowledge-based health service must be communicated to those in the field; this is at present "the greatest area of weakness". Communication within the NHS is underdeveloped but improving.

22. Professor Peckham (Q46) insisted in November 1994, "The senior managers of the NHS are now conversant with, and I believe convinced about, the value of having R&D as a core function of the NHS...I think people understand perfectly well not only the value of research *per se* but the value of the conduct of research in attracting high calibre staff to their institutions" (cp OST p456, RSE p285). Professor Peckham cited his own seat on the NHS Executive Board and the presence of several members of the Executive Board on the CRDC. In March (Q1287), he was able to tell us, "the NHS Executive Board at its April meeting will be devoting its entire strategic session to R&D. It is actually high on the management agenda. It is seen now not as a luxurious activity, an ivory-tower activity, but something which really has a major contribution to make...If we want to develop a rationally-based Health Service, this is the only way to do it; I believe that that is understood".

23. Professor Peckham went on, however, to admit that there is "a challenge in getting through to management at every level", and other evidence bears this out. The MRC is in discussion with purchasers (p67), but reports that there is "a long way to go" (Q101). In Scotland, according to the Chief Scientist, "All the Health Boards and most of the hospital Trusts have expressed a commitment to the R&D Strategy" (Q1101). Glasgow University Faculty of Medicine reports (p284), "NHS Trusts in Glasgow are starting to consider R&D issues in response to SOHHD initiatives. While there is a potential for conflict between the Trusts and the University vis-a-vis staff effort, time and resources, this will be minimised by ensuring the closest co-operation between both parties". But according to the ARC (p413), "Whilst purchasers and fundholding GPs may pay lip service to the importance of sustaining research, they are unkeen to pay for it". Professor Rona MacKie FRSE, speaking in the same context, used the same expression (Q1041); but she went on to say, "Most Trust chief executives...are fully aware that today's clinical trial is tomorrow's best therapy and guidelines" (Q1047).

24. From his experience of site visits to medical schools hosting British Heart Foundation professorships, Professor John Swales reports, "Trust Chief Executives in general describe the high value they place upon research, but it is clear that in the internal market they neither have the funds to support the indirect costs in some cases, nor are they prepared to allow too much staff time to be devoted to it. The result is a serious constraint upon clinical research, even by those academics not funded by the Trust, where contribution to the clinical service is not paid for by the host institution" (p254, cp Q841). And yet the Chairman of NAHAT, which represents almost all the purchasers and providers in the whole UK, tells us (Q923), "The Association particularly welcomes the greater interest and priority being given to both research and development throughout the NHS and also the greater priority being given to NHS needs by the wider R&D community".

25. Two of the RDRDs, Professor Haines and Professor Alberti, told us how they are attempting to "build bridges" between NHS management and R&D (Q1288). In North Thames, managers are taking courses on critical appraisal, and serving on the R&D committee and working groups; "I think", said Professor Haines, "this has paid dividends, and now when I go and speak to the chief executives it is quite clear that the majority of them understand what we are trying to do". In Northern and Yorkshire, Professor Alberti meets the purchaser chief executives once a month, and the providers fairly regularly, and when we met him was looking forward to taking the management of the purchasers and providers in Newcastle out to lunch. Protecting the research time of hospital doctors is "a continual stress, and inevitably it is causing some problems; I think on the other side we do have managers now who want the R&D side of things to work - because they see it, if nothing else, bringing more resource into the centre" (Q1289). At field level, Professor MacKie

commends the practice of laying on "specialty days" for managers (Q1054): "they are very useful days because all sorts of misconceptions are blown away...".

Dissemination and implementation

26. SCOPME endorses the R&D Strategy (p470), but perceives weaknesses in the areas of dissemination and implementation, particularly in relation to education and training which are its own particular concern.

> "As yet, the R&D strategy has not achieved the stated objective of effective transfer of information. Research findings tend to remain within the sphere of those with an active interest in research in particular areas and their wider dissemination is not very effective. SCOPME is concerned that the work of the Cochrane Collaboration, for example, is insufficiently known and its findings insufficiently applied. Ways also need to be found of translating R&D findings so that they can be used by purchasers and providers to meet identified health needs.
>
> Further, information alone is not sufficient. All parts of the medical and dental educational curricula suffer from information overload. The overall aim should be to make clinicians more critical of the information they are given and how they themselves practise. A full understanding of both educational principles and the system for postgraduate and continuing medical and dental education is therefore needed to make implementation strategies successful. There are both opportunities and barriers to bringing about change in clinical practice, and research into these is necessary as part of an implementation strategy. SCOPME supports strongly...the setting up of R&D education and training groups at regional level. SCOPME advocates that these developments should be given high priority, particularly during the early years of the R&D strategy".

27. Professor Roger Jones of UMDS, the editor of *Family Practice*, made the same point more succinctly and with commendable candour (Q422): "Much of what appears in the literature has very little effect on what we do". SCOPME suggests that implementation might be improved if the Regional R&D Committees and networks made strong links with the medical Royal Colleges, the Postgraduate Deans and the regional advisers in general practice.

28. Training was outside the remit of the R&D Task Force, but members of the Task Force who met us in January had much to say about it (QQ537-543). As Professor Pearson put it, "We cannot have a knowledge-based Health Service unless people are trained in how to use the knowledge". She posits a "symbiotic triangle" involving training, R&D and audit, and underpinning professional development. She wants to see health professionals introduced to research at undergraduate level, and appropriate training for purchasers and providers: "We do not want everybody to be Nobel prize winners, but we do need people to understand what research can do, and also what it cannot do". Professor Culyer added that commissioners of R&D also need training, "to identify what is a researchable problem". Mr John James, a purchaser Chief Executive, demurred somewhat (Q546): "I do not think that people like me can be expert in everything. The most dangerous person is somebody who believes they are. I think the key thing is that both chairs and chief executives should understand the research agenda that is going on around them and that they should not unwittingly do it harm".

29. The Conference of Medical Royal Colleges (p272) commented particularly on the Cochrane and York Centres. They strongly support the Cochrane collaboration, and are impressed by the first outputs of the York Centre; "It is not absolutely clear whether there is a need for two such centres, but it has to be said that there is much work to do in this field". The ABPI (p245) expresses strong support for the work of the York Centre on cost-effectiveness; on the Cochrane Centre, "whereas we have strong support for the concept of meta-analysis, we have some concerns over the validity of the process when it comes to comparing the published evidence for the use of a named pharmaceutical treatment now with the published evidence for the use of a product introduced, say, 20 years ago, when techniques for evaluation were less sophisticated than they are now". Professor Swales chaired a review of the Cochrane Centre (Q860); his report was "strongly supportive of an initiative that is potentially important and I think unique". However he too is concerned about meta-analysis, which in amplifying the conclusions of a set of studies can also amplify error and bias: "potentially a dangerous tool in the wrong hands".

30. Dr Pam Enderby, speaking for researchers in the therapy professions, applauds the Cochrane initiative, but warns that systematic review as practised favours some research methods, notably those of biomedical research, over others more dependent on social or educational science. She looks forward to seeing "systematic reviews of credit that are appropriate for our subjects" (Q1311).

31. When a purchaser makes decisions about what health services to purchase on the basis of systematic evidence, as opposed to tradition or impression, the result is "evidence-based purchasing". Evidence-based purchasing predates the R&D Strategy, but the Strategy has given it impetus, and is providing new means for purchasers to get the evidence which they need. NAHAT reports "a considerable amount of progress in this area" (Q925). The Chief Executive of Cambridgeshire and Huntingdon Health Commission, Mr Stephen Thornton, gave two recent examples from his area, concerning secondary referral for homoeopathy, and treatment for infertility. Mr Thornton observed that evidence-based purchasing depends on health authority staff acquiring the skills needed for critical appraisal of evidence; Professor J Howell, Chairman of Southampton and SW Hampshire Health Commission, observed that the amount of evidence now reaching purchasers is now very great - so great that his Commission now employs a part-time librarian (Q924).

32. Evidence-based purchasing is not an optional extra; it is required of Health Authorities by their corporate contracts with the NHSE (p368), and by Objective G from the Planning and Priorities Guidance for the NHS 1995-96: "Invest an increasing proportion of resources in interventions which are known to be effective and where outcomes can be systematically monitored, and reduce investment in interventions shown to be less effective". The success criteria for this objective are set out in Box 12.

33. PA Consulting, in their recent review of the Strategy for the Nuffield Provincial Hospitals Research Trust, report further examples of initiatives in this area. In South Lancashire, purchasers are preparing protocol-based guidelines for cardiac services. But evidence-based medicine is not of interest only to purchasers; it may also be pursued by providers and professional bodies. Among the Royal Colleges, the College of Surgeons and Radiologists are producing evidence-based guidelines. In one teaching hospital, developing an information system to support the selection and audit of protocol-based patient care plans, "a search revealed about 200 protocols within the hospital, taken from various sources, only a few of which were actually in use". PA concluded that the "technology" for bringing evidence to bear on everyday clinical practice "will take some years to develop. However the establishment of a formal evaluative R&D structure within the provider unit is breathing awareness of evidence-based practice into the clinical and managerial community. The link between best practice and the financial concerns of the Trust also appears to be in place, with competitive advantage being an explicit goal". Further progress will depend on the development of medical audit, and on changing "existing paradigms and mind-sets"; but "A substantial shift has already been observed over the past three years".

34. The AUDGP (p428) strongly supports the Cochrane and York Centres, but expresses "some reservations about the primary care input into these initiatives, and also about the ways in which the evidence for clinical effectiveness will be disseminated and implemented, because in primary care, contextual and personal variables are of equal weight to biomedical evidence. This broader perspective is not always grasped by those who collate and present the evidence". Dame Margaret Turner-Warwick, appearing for NAHAT as Chairman of Royal Devon and Exeter Healthcare NHS Trust (Q927), observed that evidence does not absolve purchasers or clinicians of judgement, nor rob them of discretion. Evidence may relate to clinical effectiveness or to cost, and evidence of clinical effectiveness may relate to the course of the disease itself, or to symptoms, or to possible complications. "There needs to be much more understanding by everyone, not least purchasers, of what question they are really asking before making snap decisions on effectiveness, particularly in relation to cost".

35. Sir Miles Irving reminds us (Q1267) that there is another group, besides purchasers, in whose hands evidence of effectiveness could be a powerful lever for change: the general public. The BMA (p404) similarly are keen that dissemination should include the public. They commend the creation of the Cochrane and York Centres. They caution, however, that getting research into purchasing is harder with more devolved purchasing; the latest move towards "total-fundholding" for GPs will make it even harder. They recommend a major role for the Directors of Public Health; the incorporation of criterion-based clinical audit into medical education; and increased use of information technology for dissemination. With regard to the concept of "evidence-based medicine", they sound a note of caution: "It should...be borne in mind that it is not possible nor desirable in some cases to obtain evidence for every treatment option before it is utilised in patient

BOX 12: EXTRACT FROM NHS SUCCESS CRITERIA 1995-96

"G1 Programmes of action are agreed between regional offices and purchasers, and between purchasers and providers to build on progress made locally to date to achieve substantial improvement in clinical effectiveness including, as a minimum

— An increase in the use of clinical outcome specifications and audit criteria in contracts;

— An increase in the value of services provided which are informed by high-quality evidence of clinical effectiveness (using EL(93)115 and a complementary EL to be published in August 1994) with at least two made the subject of clinical audit;

— Increased investment in 1995-96 in at least two interventions known to be effective;

— Reduced investment in 1995-96 in at least two interventions which have been identified as less effective.

G2 Health professionals are actively involved in the contract process and feel able to own activity and quality standards.

G3 Managers and health professionals are actively involved in setting research and development agenda, defining issues for research of value to the NHS and supporting such research."

Source: Planning and Priorities Guidance for the NHS 1995-96, EL(94)55.

care. Striving towards evidence-based medicine should not prevent the use of treatments where evidence is more equivocal".

36. Professor Andrew Haines, North Thames RDRD, is leading the CRDC Advisory Group on implementation. He told us (Q1277) that, among other things, they are looking at industry's experience of improving the uptake of research, and at new technological resources such as computerised decision-support systems. A number of witnesses welcome the setting-up of this Group (Dr Green p209, SCOPME p470, RAEng p461, Professor Robinson p337).

37. Professor Peckham (Q49) touched on the question, who should pay for a new treatment while it is offered alongside familiar treatments for purposes of evaluation. Dr Green reports that this has caused problems, eg for evaluating small bowel transplantation (p210). At present the Supra Regional Services Advisory Group may fund uncommon and expensive treatments if proven, but not if still under evaluation. The BMA expresses surprise (p406) that the Culyer report did not address this issue. The RCN (p332) is less surprised, but deplores "the stark separation between R&D and service development symbolised by funding arrangements".

38. The Department of Health propose to change the rules to allow SRSAG to fund evaluation; Dr Green approves, provided that the evaluation is commissioned in conjunction with the RDD following rigorous review, and that SRSAG "continues to have adequate medical representation". At present several Regions support evaluations from their own R&D Budget. See Appendix 8.

39. Dr Enderby drew our attention to an issue raised by the Research Projects Register (Q1309). At its present stage of development, the Register does not include research funded by charities with no support from the NHS. Most current research in the therapies is in this category; anyone who looked to the Register to see how much research is going on in these fields would therefore gain a false impression.

Commissioned programmes

40. Professor John Swales chaired the CRDC Advisory Group on Cardiovascular Disease and Stroke. He acknowledges room for improvement (pp255, 261): getting medical researchers to attach importance to "value to the NHS" required "a learning experience"; and the endeavour to involve purchasers and consumers was not a great success, since "neither of these groups appeared familiar enough in scientific method to throw much fresh light on research needs...A more interactive process would have been extremely valuable". However, overall, "It has been a very considerable success...the first fruits of that success will be evident within the next year or two" (p473), and "I was very impressed indeed by the expertise and care exerted by Michael Peckham's staff in support of this programme" (p261).

41. Sir Christopher Paine, President of the Royal College of Radiologists, was a member of the CRDC Advisory Group on Cancer: "The idea, I think, was a good one and we learnt from it", but he was not entirely happy with the outcome (Q872). Consultation was wide and time was short; as a result, "All sorts of good ideas were put forward and real deficits in knowledge were explored, but...we did not focus on the areas which we could really do something about. It turned out to be a list of things that were more theoretical than practical in some ways, I thought".

42. Professor D Brock of Edinburgh University found a recent NHS call for research proposals in his field of heterozygote screening for cystic fibrosis "so appallingly and ignorantly misdirected that I could not respond to it...Those who have time to sit on committees of this nature will inevitably be distanced from the cutting edge of research and therefore prone to ask the wrong questions...The UK has one of the best records of any country in medical research, and has gained this by using scientists to propose projects and their peer groups to judge the suitability of the proposals. I cannot understand why we are now contemplating moving to a committee-led system" (p284).

43. The Leukaemia Research Fund (p451) expresses the same view in more measured terms. "The second parameter [for the success of a research programme, the first being the objectivity of peer-review] is the coming together of the right individuals, in the right place, at the right time...This can be more difficult to achieve than devising the research project and is often due to serendipity. It is difficult to see how endless policy papers, strategic reviews and commissioning teams can truly influence these basic tenets. Equally it will be interesting to see how rapidly this complex administrative infrastructure can respond to new directions and innovations in biomedical research". They speculate as to the cost of maintaining the numerous committees at national and regional level; similarly the AUDGP refer (p428) to "the enormous amount of time taken in the preparation and peer review of bids for funding, particularly in the first four months of 1994".

44. The RCN commends the CRDC's approach (p330), but reports "a tendency for subject areas to exclude the nursing and paramedical contribution, and to be medically led or focussing on clinical treatment. We would urge the CRDC to extend its notion of treatment to include the management of chronic illness, and the wider context of illness as it affects the quality of life, morbidity and longevity of the individual patient, carers and family". Yet according to Professor Jane Robinson of Nottingham (p336), "The opportunities for nurse researchers to obtain funding in this area (whether alone or as members of interdisciplinary research groups) appear to have been far greater than they are, or ever were, from the Research Councils".

45. Dr Peter Doyle (Q794), commenting on the need for an evaluative culture in which good practice is disseminated effectively and bad practice is stopped, said, "The establishment of the Standing Group on Health Technology under Professor Sir Miles Irving is a massive step forward in achieving that approach". Professor Swales (p255, Q861) feels that the Group has cast its net too wide: "A more restricted pilot programme to assess the best approach in such an innovatory strategy would I feel have been more appropriate but clearly not acceptable when political pressure to obtain results was so intense".

46. According to some witnesses, the time-horizon of the Strategy is short-term (MRC p44, IPSM p448, CSTI p438, ARC p412). Professor Peckham acknowledged in November that there is an element of truth in this (Q46), but only an element: "We have to deliver results in the short term, which is why we put so much emphasis into mobilising research results. At the same time there is a need to commission clinical trials and support longer term research". In March (Q1279), he told us that the Secretary of State's announcement in December concerning implementation of the Culyer report implied "a commitment to long-term support of research".

47. Support for the Professor comes from north of the Border: the Royal Society of Edinburgh tell us (p313), "Professor Peckham's groups are encouraging longer-term national projects and have placed *less* emphasis than in Scotland on the immediate application of the results of biomedical research"; by contrast, the Scottish Office's Acute Healthcare Committee expects clinical impact within the lifetime of a two-year project grant (Q1035). However the RSE also emphasise the need to support "original work with implications in the long term as well as that with immediate operational applications" (p285).

48. Professor Robert Boyd identifies a tendency to equate health services research with short-term applied research and biomedical research with long-term blue-skies research. "In actuality, much social, epidemiological and economic research is long term and much clinical science is problem driven and short term" (p180).

49. At a practical level, the ARC considers (p412) that the deadlines for bids to the commissioned programmes have so far been too short. They too are concerned that commissioned research may take funds away from spontaneous proposals, and that there is "a danger of spending R&D funds on second-rate proposals by default" if science happens not to be ready to tackle the commissioned question. Professor Swales admits to unrealistic deadlines; he blames "internal departmental pressures" (p255) and "budgetary reasons" (p261). The time now allowed between advertisement and receipt of outline proposals is six weeks; a further six weeks are allowed to work up successful outline proposals into full proposals.

Technology transfer

50. The Institution of Mechanical Engineering (p449) expresses concern for the impact of the Strategy on clinical scientists. They fear "a complete cessation of funding for R&D projects in medical technology", in favour of evaluation; this would dissipate expertise in development engineering.

51. The Royal Academy of Engineering (p459) calls for more attention in the Strategy to medical engineering. Mr James Smith, a management consultant (p453), advises that the Strategy should form closer links with industry, and with the DTI. The Institute of Physical Sciences in Medicine (p448) considers that the "challenge and opportunity" of technology transfer from NHS clinical scientists to the medical equipment industry ought to feature more prominently in the R&D Strategy; so does the Institution of Mechanical Engineering (p449). The Council of Science and Technology Institutes (CSTI) (p439) go further, and propose separate NHS strategies for technology transfer and management of innovation. The ABHI (p415) asks what has become of the planned NHS-Industry Research Advisory Group; Professor Peckham told us in November (Q27) that it was "soon to report".

52. One way to improve NHS-industry relations would be through access to information. The ABHI (p414) calls for industry to have access to the NHS Research Project Register, and information on costs, markets, activities and outcomes; they fear that Trust confidentiality may rule this out. Another way is by part-funding collaborations: the ABHI welcomes the recent announcement of MEDLINK. This has been the main achievement so far of ACOST's report, "Medical Research and Health", which dealt largely with the transfer of medical technology: see Appendix 14.

53. "Health technology assessment", in the language of the Strategy, means evaluation of any distinct action or service configuration, whether or not it involves a piece of technological "hardware". The IPSM warns, "This unfortunate term would allow NHS spending on technology to be over-estimated even though it supported little or no technological activity" (p448, cp CSTI p438).

APPENDIX 7

The Culyer report: Opinions of witnesses

The single funding stream

1. Professor Culyer and Mr John James explained to us why the Task Force recommended drawing NHS R&D expenditure together into a single, explicit funding stream. First, the existing situation involved numerous research funding streams being used in diverse ways with no consistent quality control or objectives, and limited "ownership or understanding" on the part of purchasers or providers (Q512). Secondly, the existing situation was in fact failing to support research (Q536). Creating the single stream is intended as an enabling mechanism, to "provide language in which...people can explain what it is they are aspiring to and appropriate decisions can then be made".

2. Dr Malcolm Green, a member of the Task Force, likewise believes (p210) that the single stream will allow "clear identification of funds to support the service costs of research, which were in danger of being driven out by the service market...Within provider units, it will be possible to identify money which flows down to support research and its service costs. This will powerfully focus the minds of managers, health professionals and scientists on the need for priority to be given to this activity and of its value to the organisation. This is an important shift already evidenced within the ex-SHAs. It should give more power to clinical researchers within the service framework". However he points to two potential dangers. First, although the present Secretary of State has added money to the funding stream, others may see it as a target for raids. Secondly, the flow of the stream may be "unduly influenced by the perspectives (or even prejudices) of a very small number of people", namely the DRD and the RDRDs. In the view of the ABPI, however, creating a single explicit stream of R&D funding is "good business sense" (p246); Dr Doyle (Q824) welcomes an end to the present situation, in which "there was great opportunity for frittering money away".

3. Our witnesses are by and large content with the proposed construction of the single funding stream. The SHERT (p286) raise the question whether local and national endowment funds will be subsumed within the stream; the Department of Health assures us (p385) that they will not.

4. The Culyer report implementation plan announces that guidance on provider declarations will be issued in August 1995; a pilot exercise will take place, "to ensure that what is proposed is realistic and cost-effective and can be applied on a consistent basis"; revised guidance will be issued early in 1996, and in May of that year the process will be completed. The CSTI has doubts about inviting Trusts to "declare" R&D expenditure for inclusion in the single stream: "providers may be tempted to over-declare R&D in order to remove costs from services"; and they may subsequently decline to support pre-protocol research, on the ground that "all R&D has been declared". The latter fear appears to be confirmed by evidence from NAHAT: see below. The AUDGP similarly considers total transparency a risky strategy (p428): "There may...be dangers in opening up the true cost of research to purchasers". Professor Robert Boyd, a member of the Task Force, agrees (p181).

5. The ABHI warn (p415), "If all research is specifically funded, there could be an increasing divide between those doing research and routine clinical practitioners. This could have a tendency to reduce the assessment of newly available data rather than increase it, and could also reduce commitment at an operational level to an information-based service".

R&D levy

6. Mr John James, a member of the Culyer Task Force, explained to us why they recommended a levy for R&D: "The first idea was simply saying [to purchasers], it is actually money that is taken out of the money for services, and you should be involved in and understand the decision point which is reached. It was an extremely important point of principle" (Q512).

7. The NHS Director of Finance explained to us the Department of Health's thinking on the levy in some detail (QQ564-5). In the first year, 1996-97, the levy will be "supply-driven", consisting merely of the sum of identified NHS expenditure already committed to R&D. But from 1997-98 the levy will be "demand-led", on the basis of the identified costs of R&D (cp Professor Culyer Q516, Professor Peckham Q1280); it will be "flexible enough to ensure that we do balance demand and supply for research" and to "prevent any cross-subsidisation with service contracts"; and it will have to "compete with other priorities and contending NHS services". The process for settling the

size of this and other central levies (including one to support teaching) will be as follows (Q574): the entire NHS budget will be allocated to the Health Authorities; the budgetholder for the levy in question (in this case, Professor Peckham) will then discuss with the Health Authorities how large it is to be. The fact of the levy will be "mandatory"; but as to its size, Health Authorities "need to be content that the amount of money taken away from their individual allocations is justifiable". Whether a purchaser who was not content could in the last resort refuse to pay, Mr Reeves did not say.

8. Professor Peckham told us in March (Q1281) that the principle of a levy on all Health Authorities had been accepted, but only after some initial resistance. The Royal Academy of Engineering hints guardedly, "The levy on purchasers is not universally welcome" (p459). The CSTI (p441) is less guarded: "If purchasers have discretion over R&D funding, they will create a pressure to set the levy at a level demanded by those purchasers which have the greatest fiscal problems and thus drive it down". Dr Green observes (p211), "Service purchasers will identify their subvention for R&D and may collectively question it and/or seek to diminish it. The research community will need to continuously make clear the added value of this activity for the short- and long-term health of the NHS and its patients".

9. The Chairman of NAHAT considers (Q923), "It is essential that purchasers have a real and effective involvement in decisions about the size of the levy". However the Department tells us (p358), "Purchasers will not have a veto". In that case it is hard to fault the BMA's analysis: "theoretically this funding system differs little from top-slicing" (p405, cp RCGP p130).

10. The Culyer report recommends that the levy should be applied to GP fundholders as well as Health Authorities, and some witnesses support this (ARC p413, RCGP p130). The AUDGP (p428) are however concerned that this "may cause unnecessary polarities within the GP research community".

11. The Culyer report implies (paragraph 3.31) that the size of the levy may vary from year to year. The AMRC expressed concern that this might lead to fluctuations which could frustrate the planning of long-term research. They also observed that the size of the levy should "reflect the needs of the medical research sector as a whole". Mr John James of the Task Force, while insisting that the levy should be reviewed every year, said, "You would want a degree of stability built into the system...I would expect the margins of change to be small and sustainable" (QQ512-513). The BMA consider (p405) that the levy should be "increased in the future if the effectiveness of this approach in improving patient care and hospital efficiency is realised".

"Leakage" of SIFTR

12. One aspect of the Culyer report which concerned several of our witnesses is the proposal that the new unified NHS R&D budget should subsume the "R" portion of SIFTR, the Service Increment for Teaching and Research (see Appendix 4), returning money to teaching hospitals and other NHS institutions with substantial R&D programmes in the form of "research facilities funding" (paragraph 3.54-62) and service support funds for particular projects. On this issue the Vice-Chancellors and the Deans are united: SIFTR is already inadequate (CDMS p80; CVCP Q156); disaggregating the T and R portions will be impossible because they are conceptually indistinguishable (CDMS p73, QQ121-4; CVCP p87); and what is proposed will result in "leakage" of essential infrastructure funds from the major university hospitals (CDMS Q127; CVCP Q156), with serious consequences for both teaching and research. Other witnesses share this worry (ARC p413). From north of the Border, Glasgow University Faculty of Medicine (p283) is equally uneasy about "the destabilising effect of interfering with the ACT (Additional Component for Teaching) allocation and distribution system". Queen's University of Belfast is also worried (p219).

13. The RCGP looks forward to a "level playing-field" for access to service support and facilities funding for researchers in the primary sector (p131). The RSE approve of developing high-quality research in primary care and the community, but not "at the expense of hospital-based research" (p285); they call for new money.

14. The English and Scottish HEFCs told us in writing (p394), "We support JMAC [their Joint Medical Advisory Committee]'s assessment that the potential destabilising effects of redistribution need not be as significant as some institutions fear". In oral evidence, however, they admitted that there might be "some local damaging effects" (Q1329), especially if the funding formulae were permitted to dictate the pace of change; and they pointed to the crucial importance of the balance between research facilities funding and funding tied to projects (Q1333).

15. When we met Professor Peckham in March, he was reassuring (Q1282). The overall balance between facilities funding and the other forms of funding flowing from the single stream will be a matter for the new CRDC; but "It is clear that we essentially start from a historical position, because I am concerned to see that there is stability and that this is phased in" (Q1286). Within each institution, resources would be redirected from poor-quality research to high-quality research, but "I do not think teaching hospitals that are carrying out good research, and where there is a case for long-term support as well as service support, need have anything to fear...I do not think that medical schools that are carrying out good research will be disadvantaged". Professor Alberti, on the other hand, was less "bullish" (Q1285). "I think it could be a little difficult for some of our teaching hospitals, particularly our provincial teaching hospitals, because the money is embedded in their current expenditure and, I think, very hard to pull out...I think there is still going to be a rather tough time for a period until people readjust". Professor Peckham added in writing (p382), "Extension of service support into primary care will not be a rapid process, and academic centres have an important role to play in helping to strengthen the clinical research base of primary care".

16. The Culyer report does not distinguish dental SIFTR from medical SIFTR (see Appendix 4). Dr Winyard tells us that "[dental] research will come in as part of the Culyer proposals" (Q586); but in December the Department announced only that "Particular issues relating to supporting research in dental hospitals will be considered further". The Deans of Dental Schools (pp107-8, Q256) and the British Dental Association (p433) are alarmed at the prospect that 25 per cent, or even 5 per cent, of dental SIFTR might be taken into the single funding stream, given that SIFTR, which represents around 10 per cent of a medical teaching hospital's income, represents almost all of the income of a dental hospital. They call for the application of the Culyer principles to dentistry to be managed with care, and for "the national pot of gold for dental research" to be safeguarded. "There are sufficient differences between medicine and dentistry organisationally to indicate caution in the transference of a medical model of funding into a dental context".

17. According to the Department of Health (p385), "The research element of dental SIFTR will...not be included in the initial R&D levy established on 1 April 1996. Dental hospitals will however be asked, along with other NHS providers, to declare their R&D expenditure so that it can be added to the full R&D levy on 1 April 1997".

Research facilities funding

18. Professor John Swales of Leicester shares the general alarm of the Deans at the prospect of SIFTR being disaggregated "without careful monitoring of the consequences" (Q845). He is also alarmed by the long-term implications of a system for core funding based on assessment, "if the processes become sufficiently Draconian to remove some major institutions from the clinical research scene altogether. Once removed it is difficult to see how they could return. This would be disastrous for the development of what I believe essential - the creation of a wide research culture in the NHS" (p254). The Chairman of NAHAT, Dr C J Robinson, takes the same view (Q928): "The quality of clinical provision is to a degree determined by the presence of research or not. Therefore it is crucial that for instance we do not have in the future medical schools which are purely teaching institutions. It is our belief that that is potentially disastrous". NAHAT suspects that the funding of medical research is already too selective, with disproportionate resources concentrated in the "golden triangle" of Oxford, Cambridge and London. (This may be an instance of the general bias against London of which Dr Malcolm Green complains on p213.) Similarly the BMA (p406, Q1373) are anxious that the new system should not "impede development and improvement", nor lead to "teaching only" medical schools. They recommend, "All institutes of higher education need funding to maintain or establish a research infrastructure; centres of excellence could command additional funding".

19. SCOPME noted that "Small changes in research ratings by the HEFCE can have a disproportionate effect on funding. Care should be taken that funding for NHS research infrastructure costs should be kept reasonably constant. Research ratings should not be allowed to stifle research in small units that cannot be categorised in the same way as centres of excellence with established track records. SCOPME points out, however, that the criteria for judging excellence in types of research highly relevant to the broad scope of NHS R&D may have to be rather different from those used to assess excellence in scientific areas. "Research ratings should be used as a tool to achieve improvement and not just as an indicator of future funding" (p472, cp Q884).

20. The CDMS proposes (p74) that funds won on the basis of the research assessment should be disposed of by agreement between the Dean of the medical school and the Chief Executive of the

teaching hospital Trust, as "those most likely to be informed about needs and opportunities". In oral evidence both the Deans (Q128) and the Vice-Chancellors (Q157) stressed the importance of involving the RDRD. The Royal Society of Edinburgh propose a similar arrangement for Scotland (p284). NAHAT favours such arrangements, and reports that in some Trusts this is already happening (Q947). Professor Culyer told us, "I personally take the view that the disposition of these funds ought to be at the discretion of institutions as long as they have both to make the initial case for them and when successful provide an account of what they have been supporting. So the suggestions from the CDMS seemed to me to be quite consistent with what the Task Force had in its mind" (Q524). He added that the system of accountability ought to leave a large measure of local discretion. Mr John James, a member of the Task Force, believes that the procedure should also involve "the main purchasers upon whom the supply of patients depends" (Q529).

21. Dr Green (p211, QQ608-617, cp COSHEP Q975) perceives "a temptation to move rapidly towards infrastructure costs being tightly linked to projects and programmes", producing "an overly competitive and uncertain environment" in which research would not thrive. The current contracts between the Department of Health and the former SHAs already err in this direction, by requiring an over-prescriptive research management plan and unreasonably detailed annual review. He calls for stability, and for accountability to be "matched with a reasonable degree of security and long-termism".

22. Glasgow University Faculty of Medicine (p283) points out that universities are already required to produce a research strategy, to show the HEFC how they intend to use the R part of their block grant. These strategies will now have to take account of the NHS R&D priorities, as Glasgow's already does; "The primary stimulus for the strategy, however, arises from the academic institution and this should continue to be the case".

23. The Institution of Mechanical Engineering observe that engineering workshops in teaching hospitals are being closed down or contracted out (p449; cp CSTI p438). They propose that research facilities funds should be used for "baseline funding of a network of Engineering Development Services within the teaching hospitals, which can service the needs of NHS-funded and other medical research and provide a costed service to UK industry". Such a network might also play a role in technology transfer.

24. One institution which is eagerly awaiting access to research facilities funding is St John's postgraduate Institute of Dermatology, within Guy's and St Thomas' United Schools. St John's was an SHA until the mid-1980s. Now, though it incurs excess service costs of £2.3m per year, it neither receives SIFTR (since it does no undergraduate teaching) nor enjoys the transitional funding awarded to the free-standing ex-SHA hospitals (see Appendix 4). As a result it is losing staff. UMDS calls for transitional protective funding for "this unique national asset for dermatology" (p444).

Research assessment

25. The Culyer report proposed that funding for research facilities would be allocated to institutions on the basis of "periodic review of the quality, quantity and relevance to the NHS of their R&D activities", conducted every 3-5 years along similar lines to the HEFC Research Assessment Exercises, or the Thompson review of the London research hospitals in 1993. There is general agreement with the principle of infrastructure funding based on research assessment (eg Q897), but general concern about the extra administrative burden involved. Many of our witnesses agree that the NHS should collaborate with the HEFCs to conduct a single common research assessment of medical schools and their associated hospitals (CDMS p74, Q149; CVCP p87; RSE p285; Glasgow p283; Belfast p219; CSTI p441; MRC Q109).

26. Professor Peckham told us in November (QQ15-17) that this possibility was under discussion, and that he hoped that the first assessment would take place in 1996-97; in March (Q1288), discussion was continuing, but marrying the two assessments was turning out to be "not a simple task". According to the HEFCs (p394), "It may...not be possible to assess NHS facilities as an integral part of the Funding Councils' assessment exercise. There are opportunities, however, for the NHS to make use of the expertise, methodology and mechanisms that have been established and the information collected in the Funding Councils' assessment exercise. Discussions are continuing..." In oral evidence (Q1343) they were more forthright: the 1996 Research Assessment Exercise is already under way, and it is too late to import a new element of assessment in relation to the NHS. They speculated as to the cost of the exercise: the 1996 RAE is expected to cost the

HEFCs £1m and the universities £12m, not counting academic staff time; an equivalent exercise for NHS purposes, limited to clinical departments, might therefore cost £3-£4m.

27. The MRC are anxious that whatever scheme is chosen should first be piloted (Q109, p65). The Thompson review of the London postgraduate hospitals might be considered a pilot: Professor Peckham told us in November (Q15) that that exercise was "labour intensive and involved a great deal of academic time"; Sir Michael Thompson himself (Q158) acknowledged that it was "very expensive"; in March Professor Peckham told us that extending the Thompson review nationally would not be "feasible or desirable" (Q1288, p383). The Leukaemia Research Fund (p452) are also concerned about the cost of the exercise; they urge that it be carried out by the RDD, not by "another agency".

28. Professor Robert Boyd, a member of the Task Force, observed that NHS research assessment might be conducted hospital by hospital, or school by school. He is anxious that the latter approach be adopted: "I think if facilities for support are allocated to individual provider units, that would be a recipe for stagnation, in-fighting and failure to progress and re-organise between them within a single conurbation" (Q525).

Curiosity-driven, pre-protocol research

29. What the Culyer report means by "implicit" research is set out in full in Appendix 4. In essence, it means not a particular category of research, but research of any kind funded in a particular way, namely by NHS providers "on their own account out of their income for patient care". The report's recommendations for the future of activities currently supported this way are set out in full in Box 13.

30. The Culyer report (3.39) recommends that purchasers should "allow providers the freedom" to support pre-protocol and curiosity-driven research, and expresses the hope that they will "recognise the substantial benefits" of doing so. In November Professor Peckham (Q14) indicated that more robust proposals for the support of undirected research were under consideration: either an allowance within research facilities funding (the AMRC favours this option), or "a specific reserve". However, when we met the NHS Director of Finance in February (Q564), he said only, "It could well be that individual Trusts, with the acquiescence and agreement of the DHAs who contract with them, would wish to see this type of research funded, but that would be a local agreement at this stage between the Trusts and their respective purchasers".

31. This does not convince the CSTI (p441): "The financial constraints on both purchasers and providers make such permission unlikely". They are particularly concerned for the "implicit research" (ie "maintenance of high quality scientific services") and "service development research" (ie "development of ideas that arise from a critical review of the service provided") traditionally carried on by clinical scientists, which have in the past led to marketable innovations. They call for a separate funding stream for service development research.

32. They are supported by the SHERT, whose main concern (p286) is for "modestly-costing opportunistic or feasibility studies" and "small, local or pump-priming projects". Such work is "much too neglected by the bureaucracy emanating from thinking big"; yet "it is these very projects which may be denied support by financially stretched providers, who are likely to pass the decision up the chain in an effort to obtain finance from R&D funds".

33. The BMA is similarly concerned (p405). "The benefits of local research, in particular its role in encouraging inspirational/curiosity-driven research, need to be recognised". The Institute of Physical Sciences in Medicine (p448) is also worried. "If the discretionary support of purchasers and providers is to be the only source of funding for curiosity-driven research, it is essential as a minimum that purchasers and providers agree a policy and plan in consultation with their RDRD, and that the latter monitors the implementation of the plan by receiving reports". Dr Jean Potts joins her voice to this chorus of concern on behalf of the therapy professions (Q1323); the RCGP (p130, Q395) warns of "a perverse incentive for those providers most sensitive to the importance of R&D".

34. NAHAT represents almost all the purchasers and providers in the UK. Its Chairman told us (Q923), "Having met their levy, we believe it is unrealistic to expect purchasers...to then also finance curiosity-driven research, except of course to the extent that an inquiring, questioning approach is an essential element of the good clinical practice being purchased". Mr Stephen Thornton, of Cambridgeshire and Huntingdon Health Commission, explained (Q949) that, whereas the Culyer report envisages the costs in question being "marginal", purchasers fear that "there may

BOX 13: CULYER REPORT RECOMMENDATIONS ON IMPLICIT RESEARCH

3.35 The testimony we have received (2.7-2.12) leaves us in no doubt that this activity [implicit research] is at risk unless it can be identified, its quality and relevance to the NHS can be assessed, and there is a clear understanding about who is responsible for funding it...

3.37 We would expect the levy to be available to cover those direct, indirect and service support costs of work identified in category (i) [suitable for central funding] and, as a transitional measure, in category (ii) [not suitable for central funding, but "of sufficient value or potential value to the NHS in the short or long term to warrant continuing support"]. We envisage that in the first instance NHS providers would be invited to declare those activities and related cost that they wished to have funded from the levy. This would be on the understanding that until the activities had been assessed, they would continue to receive from the levy the full amount of costs they had declared. NHS providers should be given a generous period of time in which to make their declarations.

3.38 **We recommend that the direct, indirect and service costs of R&D in NHS providers which are currently funded from their income for patient care are progressively declared and added to the amount which is levied on purchasers' allocations.**

3.39 The continued support of work in category (iii) [pre-protocol and curiosity-driven research] is essentially a matter for NHS purchasers and providers. We hope they will recognise the substantial benefits of these activities. In most cases it is likely to be impractical to identify these small parcels of activity for specific funding; and the cost would outweigh the benefits, even where it was possible. Hence, **we recommend that purchasers of health care allow providers the freedom to continue to support pre-protocol work, curiosity-driven research and similar activities, and to provide for the costs where these cannot be met by external sponsors.** We would expect these costs to be marginal. Precisely how to provide for these costs will be for purchasers and providers of health care to agree, but need not be regulated by separate contract.

3.40 Work in category (iv) ["work that is not worth supporting"] should be stopped and funding redirected to patient care or to R&D in the other three categories.

3.41 It is not our intention that the levy, or the process described above, should discourage purchasers and providers of health care from continuing to invest some of their own funds in R&D where they have proper means of identifying the need. Provided that they have adequate R&D business planning systems, **we recommend that purchasers and providers of health care should be able to supplement the levy in order to meet national and regional priorities more quickly. They should also have the freedom to commission their own R&D.**

become an expectation that, if R&D proposals cannot be approved for expenditure within the levy, then the next port of call for the R&D community is to come to local purchasers and expect funding here".

35. In further discussion (QQ956-961), NAHAT's position on this issue became clearer. If purchasers and providers made major expenditure on their own account in support of pre-protocol research, this would run counter to the principle of the Culyer report that R&D expenditure should be drawn together and focussed on agreed priorities and high-quality work; it would also probably be unaffordable. But low-cost or no-cost activities, for instance inexpensive tests on patients already in the hospital, will not be prohibited. Mr David Moss, Chief Executive of Southampton University

Hospitals NHS Trust, said, "One of the reasons that my Trust wanted a Director of R&D is to nurture and encourage research, not to control and direct it".

36. Dr Green, a member of the Task Force, admits that this part of the Culyer report is unclear (p212). He believes that the Task Force intended that, while some pre-protocol/curiosity-driven research will be funded out of purchasers' and providers' own funds, as "implicit" research, such work will also be eligible for support from the levy. He adds, "Implicit research and its funding may not be adequately identified. This type of research could well be squeezed out".

37. To the extent that pre-protocol research will be eligible for levy funding, Professor Swales remains concerned: "This type of work is often responsible for significant later clinical development. A rigid system of assessment and funding of infrastructure costs would tend to destroy this" (p254). He recommends "non-earmarked money" to support early studies, and "early people", gaining the experience necessary to earn a fellowship from the MRC or a major charity. Some hospitals use endowment funds for these purposes; and the British Heart Foundation gives its professors "10 per cent extra on every grant...without any strings" (Q856), to support "preliminary experiments and people" (Q859).

38. Whatever arrangements are agreed upon, Professor Jack Howell is anxious that they should apply in all NHS settings. "There are people throughout the NHS who might have a question they would like to test before knowing whether it was something to proceed with" (Q948). The RCN agrees (p333).

Service support funding

39. The Culyer report (3.48, 84) recommends that hospitals should "sign off" for the service support requirements of clinical research projects before the researcher receives project grant approval. NAHAT supports this proposal (Q952). The MRC told us that they are prepared to accept this, but that in the case of MRC-funded projects it ought to be something of a formality (Q58, p64). Dr Green considers it both practical and desirable (Q634).

40. The AMRC were less confident and more hostile (Q185). Charities receive over 12,000 applications for research grants every year; getting each of them signed off would be a major administrative burden. An extra level of scrutiny would not improve upon the existing processes of peer review; but it would enable the NHS to deny service support to projects not consistent with the CRDC priorities. If second-rate research, locally funded without peer review - of which Professor Culyer believes there is "a good deal" (Q518) - is removed from the system, the AMRC are confident that, given proper consultation between researchers, universities, hospitals and funding bodies, there will be enough service support to go round.

41. The SHERT (p286) fears that the system will lead to "excessive delays in securing funding for important projects". Professor Swales fears an outcome which might be "bureaucratically nightmarish" (Q850), and would at least amount to "one more obstacle" (Q865); we put it to him that signing-off might be imposed on award of a grant, rather than on application, and he considered this more acceptable. Professor MacKie admits that Trusts have a right to know in advance about proposed research activity, but she would prefer a requirement to consult rather than a signing-off procedure (Q1044): Trusts must be educated into regarding involvement in research as highly desirable.

42. The Department defends the proposal, as a way to overcome the tendency of NHS managers to regard research as a "parasitic activity", by enlisting them as "joint sponsors" of research proposals:

> "If we want NHS Trusts to be positive supporters of the R&D they need to know that:
>
> — the R&D is properly funded and not using hospital resources without agreement;
> — it is worthwhile R&D;
> — the service support and facilities it uses are properly funded and not diverting money meant for patient care;
> — it is not creating service expectations without good cause and which no-one will pay for in the long term...
>
> If the NHS provider has to sign up to a research proposal, it can be sure of the extent of the commitment the NHS is making and meet its obligations" (p366).

43. Professor Culyer defends the proposal more pragmatically (Q517): something along these lines is necessary, because the old informal system is breaking down. "The answer lies crucially in devising a set of accounting conventions that are easy to interpret...it has got to be managed in a sensible way, which would of course include the NHS not demanding an unreasonable amount of detail".

44. The BMA (p405) note that the Culyer report also gives a role to the CRDC in setting priorities for provision of service support: "There is a danger that the CRDC may not view the provision of funds for service support for basic research as consistent with their directed programme. The value of long-term, fundamental clinical research must be realised by the CRDC if we are not to lose very important areas of research that require service support from the NHS". The English and Scottish HEFCs are similarly afraid of "a situation in which service support is removed from high quality clinical research to fund other research activities" (p394). Professor Robert Boyd, a member of the Task Force, fears that this situation could arise by sheer misunderstanding, if those responsible for the NHS R&D Strategy fail to appreciate that the Culyer report gives them the power of life and death over all clinical research and that this will require them to adjust their aims and objectives: "There is a small but definite risk of destroying something we have built up over 200 years" (Q526).

45. SCOPME (p472) suggests two kinds of research which would suffer if service support were conditional on benefit to the NHS: research which might lead to more expensive health care; and research in areas of more interest overseas than in the UK, such as tropical diseases. The Royal Academy of Engineering offers a third (p459): research aiming at "the optimisation of the UK's competitive position in the global market for medical equipment (or, presumably, for pharmaceutical and diagnostics)".

46. Professor Peckham regards these concerns as "ill-founded" (p382). Service support "will cover clearly established needs"; new money has already been allocated, and more will be added if a "convincing case" is made; meanwhile money will not be allowed to be used to support "poor quality research".

The NHS-MRC Concordat and the medical charities

47. The Culyer report (3.17) recommends that the Concordat be reviewed. Professor Peckham said (Q32) that, while the NHS has a "special relationship" with the MRC, its commitment to service support for the Council's research cannot remain open-ended. Professor Culyer commented (Q507), "We were needless to say very supportive of the work of the MRC...and I do not think any of us expected to see any of it in practice jeopardised by these new arrangements". But the Concordat offered the MRC a "blank cheque", taking no account of "the opportunity cost of other research which the NHS ought to support but which it cannot, despite a relatively high priority on the NHS side". He admitted, however, that the Concordat was causing no difficulties in practice (QQ507-8). Professor Ingrid Allen, a member of the Task Force, went further (Q511): "The Concordat, however imperfect its writing, in practice is a very useful and positive model which could in modified form be used in relationship with charities".

48. The OST (p457) accept the need for "discussions" about the Concordat. The MRC (p46) are not content: they consider that the Culyer report failed to take account of the MRC's existing obligations to the health departments.

49. The Culyer report also recommends "clear understandings with other national research funding bodies" (paragraph 3.19). The AMRC welcomed this proposal with caution, observing that each charity is an independent body, with its strategy and priorities more or less constrained by its Trust Deed (Q187). Charities already work with each other and with the MRC - notably through the UK Cancer Co-ordinating Committee - to achieve complementarity; and the AMRC is already discussing with Professor Peckham a "set of principles" to guide charities' dealings with the NHS. According to Professor Culyer, the Task Force had in mind ways to bring the charities "more to the table" with a view to joint planning, without compromising their independence (Q507).

50. Professor Swales (Q858) points to the complementarity between charity and MRC funding as an argument for modifying the Concordat. Areas of research well supported by charity, notably cancer and heart disease, are not funded to the same extent by the MRC; therefore, so long as the MRC is guaranteed the lion's share of NHS service support, such areas are disadvantaged.

The United Kingdom

51. The AMRC told us of difficulties faced by charities in interfacing with four different systems of higher education funding. The MRC point (p66) to the additional difficulties which would arise if each part of the UK adopted a different method of assigning health service support to clinical research. The SHHD acknowledge this (Q1141); they intend "to end up with a system which is compatible with other parts of the UK". The Welsh Office envisages adopting "a good number of the main recommendations" (p480); the DHSS (NI) regards the "general recommendations" as equally applicable to Northern Ireland (Q744); but in each case the context for implementation is rather different.

National Forum and Central Research and Development Committee

52. Sir Leslie Turnberg has two worries about the new CRDC (Q876). First, it is very big. Secondly, "There is a danger that those who have to direct the research, and those who have research experience, will be dominated by the service need rather more than the balance I would like to see, which is in favour of those who have a direct interest and involvement in research". The Chairman of NAHAT speaks for those responsible for "the service need" (Q923); he expects purchasers to have "a real and effective involvement in decisions about...[the levy's] broad distribution between the R&D elements and, within those, the main areas to be covered". The BMA, like Sir Leslie, comment on the size of the CRDC (p404): this means that "its role can only be advisory". On the other hand Dr Pam Enderby, Chairman of the College of Speech and Language Therapists, considers that the CRDC still lacks "broad representation" (Q1304): as a result there have been cases of consultation being conducted on the basis of "ad-hoc-ism" and "somebody happening to know a speech and language therapist", rather than through the proper channels.

53. The Royal Society of Edinburgh wants a seat in the Forum for the Scottish Chief Scientist (p284); Queen's University wants a seat on the CRDC for somebody from Northern Ireland (p219). The CSTI call for representation at all levels for clinical scientists (p439); the ABPI expects seats for the pharmaceutical industry (p246); the Royal College of Midwives (p340) deplores the absence of representation of midwives, nurses and "user groups". The Leukaemia Research Fund (p452) welcomes the creation of the Forum, especially since much research funding today is done in partnerships. However they warn, "The very different working practices and agendas of the NHS, the Research Councils and the biomedical charities will be difficult to reconcile within such a forum. The emphasis must be on co-operative partnerships, so that the whole is greater than the sum of the parts".

54. The BMA is concerned that the Forum should not carry co-ordination too far. "There is a need for a plurality of sources of funding for research and a plurality of views on priorities. Organisations that fund medical research should therefore retain their independence in terms of setting R&D priorities" (p405).

Transaction costs

55. The transaction costs of NHS research assessment and "signing off" for service support have already been considered. The Culyer report itself expresses concern over the administrative and bureaucratic burdens which its proposals might impose; and this concern is widely shared. SCOPME (p471) is worried about the cost of accounting for "implicit" research, and the delay to research projects while their service support implications are costed. The RSE (p285) is concerned about the increasing workload involved in peer review. COSHEP are anxious that teaching hospitals should not have to instal "a new bureaucratic layer in order to get back this money" (Q971).

56. NAHAT (QQ934-6) reports that Trusts are appointing R&D Directors ("often a part-time but very high-calibre person" - Q1283) to manage the costing and charging which will follow the demise of knock-for-knock, and foresees that research facilities funds will have to be top-sliced to pay for their own management; "there is a concern about balancing the cost of acquiring such information as opposed to the ultimate benefit...We are unaware that research has been carried out, and we think it is appropriate to address that before devoting resources, which are very scarce, to such a process". The HEFCs propose (Q1372) that the NHS should pay for contract managers, to assist the Dean of each medical school.

57. The BMA propose (p405) that the initial size of the R&D levy should "take into account the additional costs of the introduction of a new system of funding". Dr Green proposes that, where a provider has a large research portfolio involving projects, programmes and facilities, research facilities funds and service support funds should be "rolled up into one contract" (p211, QQ608-617), analogous to an HEFC block grant. This would minimise bureaucracy, and increase flexibility. He also calls for research contracts within the NHS to be treated as "statements of agreed practice (and funding) rather than formalised legal documents", and for the RDD and the providers not to get "bogged down in legalistic detail".

APPENDIX 8
Regional R&D Plans

WEST MIDLANDS STRATEGY AND PLAN 1994

Acting RDRD - Professor Alexander McNeish
Medical school - Birmingham
Regional R&D budget 1994-95 - Research element of SIFTR £5.1m, Regional R&D Programme £2m

SIFTR

1. The Plan acknowledges, "SIFTR...almost certainly does not equal in amount the full cost of supporting research in those institutions that receive an annual SIFTR allocation. Furthermore there is a significant amount of research, incurring infrastructure costs, that is carried out in institutions that do not receive SIFTR".

2. It was intended to set up a "database of SIFTR-receiving units" by 1994, to inform future SIFTR allocations; to devise a new management structure for SIFTR, in discussion with Birmingham University; and to "obtain knowledge of SIFTR spending" by means of workshops with SIFTR "experts".

Commissioned R&D

3. The Plan acknowledges priorities from various sources:

Health of the Nation

*coronary heart disease and _stroke_
*cancer
*mental illness
sexual health
accidents

Regional Public Health Report

poverty
*diabetes
*asthma
lung cancer
rehabilitation
surveillance
environment
sexual health
infant death
*learning disability
*stroke
breast cancer

RHA Planning Guidelines

*heart attacks and _strokes_
family planning
*learning disability
young smokers
community services
healthy alliances
cost effective prescribing
access to Regional Specialty Services

Regional R&D Advisory Council

*primary/secondary care interface
*ethnic differences
health needs assessment
morbidity information from primary care
purchasing
advanced nurse practitioners
rehabilitation
referral in primary care

4. Items in italics appear in more than one list; items marked * have been identified as national priority areas by the CRDC.

5. The Plan acknowledges, "Even when high priorities are established, it is still necessary to ensure that the commissioned work is of high quality".

6. It is not easy to discover from the Plan how these priorities are being translated into commissioned research. A programme of health technology assessment is being prepared: "We in the West Midlands have completed important groundwork, and are positioned to take the lead by example". The CRDC has given the West Midlands the lead in its review of ethnic influences on health. Task Forces have been, or are being, established to refine research priorities in the areas of the primary-secondary care interface, rehabilitation, cancer, and advanced nurse practitioners. For 1994-95, £314,000 is already committed to commissioned research into learning disability services,

REGIONAL R&D BUDGET 1994-95 £000

Commissioned R&D	879
LORS	321
Fellowships	300
"Aggressive Intelligence Facility"	250
Establishment	200
Education	50
TOTAL	2000

school nursing services, premature birth, schizophrenia, community dentistry and clinical guidelines in contracts, plus the Research Register, an institutional evaluation, one of the Task Forces referred to above, and joint funding with the MRC.

Locally Organised Research Scheme

7. Before the Plan took effect, the West Midlands put £700,000 per year into LORS. The scheme was re-launched in 1994 with a reduced budget and the intention to focus on priority areas.

Fellowships

8. West Midlands RHA has instituted "Sheldon fellowships" (medical, around £50,000 over two years, six awards each year) and "New Blood fellowships" (non-medical, around £45,000 over two years, six awards each year).

Aggressive Research Intelligence Facility

9. This curiously-named Facility will function as an active link between the York Centre for Reviews and Dissemination and users in the Region.

Establishment

10. The Regional R&D Office consists of the Director (four days a week), a Deputy Director (full-time) and an Office Manager (full-time).

Education

11. Planning under this heading is at an early stage.

Research-based purchasing and contracting

12. The Plan expresses the intention "to evaluate methods of translating the outcome of high quality R&D into purchasing contracts and hence into routine health care services". A "think tank" has been set up on "getting research into practice", and also a Task Force on incorporating R&D findings into clinical guidelines. An "R&D expert" is to be included in each "Purchasing Task Force", and it is intended to "influence the conduct of selected purchasing contracts for 1995-96".

NORTH WEST R&D PLAN 1994

Acting RDRD - Professor Alasdair Breckenridge
Medical schools - Liverpool, Manchester
Total R&D budget 1995-96 - £5m, to be spent roughly as follows:

Liaison Group-led R&D	£3m
Strategic R&D	£1m
Reactive R&D	£1m

This Plan contains no detailed budgets, and no lists of priorities or grants.

Region	RDRD	Medical Schools	R&D budget 1994-95	Responsive funding 1994-95	Commissioned research 1994-95
West Midlands	Professor Alexander McNeish*	Birmingham	£2m	£321,000	£879,000
North West	Professor Alasdair Breckenridge*	Liverpool Manchester	£5m*	£1m*	£4m*
Anglia & Oxford	Dr Muir Gray (succeeding Professor Richard Himsworth)	Oxford Cambridge	£3.3m	£934,000	£230,000(?)
Trent	Dr Pat Cooke*	Nottingham Leicester Sheffield	£3.4m	£810,000	£810,000
North Thames	Professor Andrew Haines	Charing Cross/St Mary's University College/Free St Bart's/ London (+ BPMF, RPMS)	£6.8m	£1.6m	£2.7m
South & West	Professor Stephen Frankel	Bristol Southampton	£5.0m	£1.3m	£1.4m
Northern & Yorkshire	Professor George Alberti (part-time)	Leeds Newcastle	£6.8m	£1.2m	£4.1m
South Thames	Professor Terry Stacey * Acting, part-time, pending full-time appointment	St George's King's College UMDS	£5.0m * 1995-96	£1.2m * 1995-96	£1.2m * 1995-96

Liaison Group-led R&D

13. The Plan envisages that each DHA will set up an R&D Liaison Group, to identify priorities for R&D. Each Group was to submit a list of five top priorities to the Regional "Core Groups" by 5 January 1995. The Core Group will allocate these priorities to subject areas and submit them to Working Groups, for translation into feasible research questions. A call for proposals will be issued; proposals will be assessed by the Working Groups, using standard criteria (set out in the Plan) and external review; the Working Groups will make recommendations, and the Core Group will allocate the available funds, within the limit of £50,000 per year per project. Preference will be given to high-quality applications involving multidisciplinary teams and collaboration between different centres. The process will be repeated annually. The Plan recognises that some issues might be better addressed by systematic review than by new research; where a review is needed, it will be done in collaboration with the Cochrane and York Centres.

Strategic R&D

14. The Liaison Groups and the Core Group will commission a complementary programme of strategic R&D which is "likely to have a longer-term perspective and may concentrate on developing a particular capability for R&D in the Region".

Reactive R&D

15. A Small Grants Committee will administer a scheme of reactive funding. The scheme will respect criteria of relevance (set out in the Plan), but will not be prescriptive. Grants will be awarded every three or four months, up to £30,000 per year per project.

Getting research into practice

16. The Plan proposes three distinctive means of getting research into practice. First, the Innovative Development Fund (formerly the North Western RHA Medical Innovation Fund) will provide pump-priming funds for introduction and evaluation of new research-based interventions or approaches, up to a limit of £50,000 per year per proposal. The Plan sets out criteria for the scheme, including the expressed support of purchasers. Secondly, "the relationship between R&D and audit will be central to the success of the strategy": the R&D Liaison Groups will include audit chairmen; joint projects involving both research and audit will be set up; and the results of R&D will inform audit and the development of evidence-based standards and guidelines. Thirdly, corporate contracts require purchasers and providers:

- "to invest an increasing proportion of resources in interventions which are known to be effective and where outcomes can be systematically monitored, and reduced investment in interventions shown to be less effective;

- to demonstrate the use of research-based information in purchasing decisions and contract pricing;

- to improve the flow of research-based information, collaborate with other agencies to support research and to develop the potential of the organisation to undertake research where appropriate, as well as to interpret and appraise critically the findings of R&D;

- to demonstrate they are using the results of R&D in relation to the specific health needs of their population;

- to demonstrate R&D input into their annual and strategic purchasing plans."

Training

17. Training is to be provided for members of the Liaison and Working Groups. A Technical Support Network for R&D and audit will provide training and advice in statistics, methodology of randomised controlled trials, computation and survey design. As part of this network, the new Manchester Centre for R&D in Primary Care, largely funded by the Department of Health, will provide a research support service. The Region will fund training fellowships in health services research, possibly in collaboration with the MRC or ESRC; and established researchers will receive project-specific continuing education and training in such areas as epidemiology, health economics

and statistics. Finally, Critical Appraisal Workshops are proposed for those responsible for clinical or organisational decisions at purchaser or provider level.

ANGLIA AND OXFORD R&D REPORT 1993-94

Acting RDRD - Professor Richard Himsworth (now succeeded by Dr Muir Gray)
Medical schools - Oxford, Cambridge
Regional R&D budget 1994-95 - £3.3m (Oxford £2m, Anglia £1.3m), plus academic posts £5.9m (Oxford £2.6m, Anglia £3.3m)

18. This short and very readable report sets out the R&D activities of the former Oxford RHA and East Anglia RHA, and their R&D budgets for 1994-95, which together amount to £3.3m.

REGIONAL R&D BUDGET 1994-95 £000

	Anglia	*Oxford*
Project grants	463	471
Research groups	159	585
Education	110	255
Commissioned research	15	215
Service support for MRC	200	0
Cochrane Collaboration	0	82
R&D Directorate	228	181
"Available resources"	172	199
TOTAL	1347	1987

Academic posts

19. Funded posts are to be reviewed by a new Regional Universities Liaison Committee.

Project grants

20. East Anglia RHA ran separate project grant schemes for biomedical research and health services research; Oxford RHA covered both within LORS. These schemes "are highly valued by the research community and...are likely to continue in the future". The report lists 30 East Anglia RHA biomedical research project grants ongoing during 1993-94, 29 East Anglia RHA health services research project grants, and 57 Oxford RHA project grants.

Research groups

21. Oxford RHA was committed to core funding for the Oxford Health Care Epidemiology Unit (exploiting the Record Linkage System), the Oxford Health Services Research Unit, the Cochrane Centre (largely funded by the central NHS DRD) and the Oxford Institute of Nursing (pump-priming funds for 3 years only). East Anglia RHA supported the Cambridge Health Services Research Group (studying ageing, palliative care, and the organisation of primary care).

Education

22. This budget heading covers a range of activities. The RHA supports the Oxford Centre for Evidence-Based Medicine, and has a small commitment to dental evidence-based health care. Various education courses are supported, involving training in health services research, research methods and critical appraisal; developments include training in critical appraisal for clinicians and purchasers, short courses in epidemiology and research methods for managers, GPs, GP trainees and junior doctors, and a modular part-time MSc course to be based at the proposed Oxford Institute of Health Sciences. The report notes a commitment to "Library Information Services for the 21st Century", but gives no details. Research Fellowships are funded: the report lists seven fellowships funded by East Anglia RHA in 1993-94, five in biomedical research and two in health services research.

Commissioned research

23. The report lists the following commissioned research projects for 1994-95:

National Perinatal Epidemiology Unit
Young suicides
Laser prostatectomy
Abdominal aortic aneurisms
Hospital at Home (a scheme first piloted in Peterborough)
Sub-arachnoid haemorrhage
H Pylori attitudes and practice
H Pylori eradication

24. These projects arose "by definition of priorities within the Region, or by picking up high-scoring research proposals submitted to national priority programmes by groups from within the Region". "Proposals developed in response to CRDC priorities but not funded centrally will be considered by the relevant research committee against their usual criteria and only funded if they meet this standard". Priority-setting workshops in priority areas identified regionally or nationally have been held, as follows:

National (CRDC) priorities	*Regional priorities*
Physical and complex disabilities	Antenatal screening
Primary/secondary care interface	Teenage health
Cancer	Surgery
Mother and child health	Health of the elderly

Service support for the MRC

25. The report describes this as "a contentious area". This is the first year in which service support provided under the Concordat has been budgeted separately; "because of the nature of clinical research, the calls on this budget are unpredictable". The report lists four MRC trials currently running in the Region.

Getting research into practice

26. The report pays tribute to Dr Henry McQuay, the former RDRD, who pioneered the "Bandolier" fact sheets and GRiPP. Both these initiatives have been picked up by other regions. The report notes that they are likely in time to be subsumed within the NHS-wide R&D Information Strategy. While Oxford RHA was developing GRiPP, East Anglia RHA evolved a complementary "bottom-up approach: providers being required to show systematic use of research findings in each area of significant clinical activity". The report comments, "Time will show which approach is most effective in changing practice, but very likely a combination of both will prove best".

Regional Project Registers

27. Oxford and Cambridge have been in the forefront of progress towards a National Project Register System, developing software and data definitions and compiling data for the Region.

Networking

28. In East Anglia RHA, every DHA and Trust appointed an R&D Co-ordinator, to pass information between the Regional R&D Office and those involved in purchasing and providing. In Oxford RHA, DHAs began to develop R&D strategies of their own. "R&D staff have continued to spend much time developing these links over the year".

TRENT DRAFT R&D REPORT 1994 AND PLAN 1995-96

Acting RDRD - Dr Pat Cooke
Medical Schools - Nottingham, Leicester, Sheffield
R&D budget 1994-95 - £3.4m

TRENT R&D BUDGET 1994-95 £000

LORS	810
Commissioned health services research	810
Trent Institute for Health Services Research	500
Clinical developments	400
Training	300
Focus for Primary Care	275
R&D Office	183
Service support	60
Medical Care Research Unit	38
Research reviews	23
Seminars, meetings	20
Other	2
TOTAL	3422

Regional R&D Strategy

29. Trent RHA launched its own Regional R&D Strategy in September 1992. Since then, the balance of spending has been shifted "towards service-driven R&D (but not at the expense of research-driven R&D)" - see table - and "facilities needed to make up the revealed shortfall in R&D capacity" have been established. Professor John Swales, chairman of the Regional R&D Strategy Council, comments, "At Trent RHA we have been fortunate in having a Health Authority that is strongly committed to the support of research. We have the disadvantage perhaps of two new medical schools with little in the way of endowment funds available for the support of research. Trent funds therefore assume even greater importance" (p261).

Spending on LORS and commissioned health services research, £000

	1991-92	1992-93	1993-94	1994-95
LORS	604	604	628	810
HSR	164	344	670	810

Setting priorities

30. In 1993-94, Trent held one-day priority-setting workshops on infant and child health, nutrition and asthma. Participants included patients. Paper consultations have been held on diagnostics and imaging, and on organisation and management; participants are identified by means of a "Register of R&D interests". Further demands for research, or reviews, have been generated by Regional Policy Groups.

Consulting purchasers

31. Through the Performance Management process, the RHA has consulted purchasers about the R&D Strategy. DHAs feel able to influence R&D priorities, while most GP fund holders do not; the research outputs which most influence purchasers are "work at the development end of the R&D spectrum" and authoritative reviews, including the Effectiveness Bulletins. The sorts of R&D which purchasers wish to see in the future are:

- evaluations of cost-effectiveness;
- work on patients' views and behaviour;
- work relevant to community care, crossing the primary-secondary care boundary and covering the "total package of health care across disciplines and sectors";
- definition of health needs; and
- reviews, clinical guidelines and purchasing protocols.

Trent Research Scheme (LORS)

32. The Report lists 47 ongoing projects funded before 1993-94, 18 funded from April 1993, and 11 funded from April 1994.

Commissioned health services research

33. The Report lists 48 health services research projects ongoing in October 1994, as follows:

National priorities	
Mental health and learning disabilities	12
Regional priorities	
Discharge into the community	4
Unemployment and health	1
Substance misuse	2
Audiology	2
Infants and children	4
Health Technology Assessment (including work on diagnostic imaging for national SGHT)	6
Support of national initiatives	
Health of the Nation	3
Other	7
Support of service planning	
Various	7
TOTAL	48

Service support

34. The Report lists ten projects funded from non-NHS sources (6 MRC, 4 other) for which the RHA has met the excess costs of service support, "where this was creating problems". "Although we look forward to the establishment of a clear, formal mechanism, nationally co-ordinated, to provide excess service support, it is realised that in the transitional period there may be continuing difficulty. An intention, for the coming year, is to make every effort to ensure that no important national trials are hampered by service support problems for Trent participants".

Trent Institute for Health Services Research

35. This new Institute consists of three Units, at Leicester, Nottingham and Sheffield Universities. "The Institute and the research teams associated with it are already attracting increased external funding to carry out powerful HSR, pertinent to the needs of the service".

Focus for Promotion of Health Services Research in Primary Care

36. This initiative is intended to support and complement the new National Centre for R&D in Primary Care in Manchester. The aim is "to develop the culture within primary health care to become more favourable to R&D", through access to training, help and advice, practice networks, and a system of communication. The RHA will provide pump-priming funds of £550,000 over two years. Professor Swales told us what happened (Q855): "We had no idea...how this was going to be used, so we took the traditional approach of throwing it open to bids from outside. We had a very strong bid from a consortium of largely academic departments of general practice, with an excellent programme of developing infrastructure for research in general practice, and we are now proceeding with this".

Health Services Research Training Awards

37. The RHA offers small grants (up to £1,500 over two years), training grants (up to £20,000 over two years) and training fellowships (up to £30,000 p.a. for three years) to enable NHS staff to undergo training in health services research. 27 awards were made in 1993-94. Professor Swales comments (p262), "We have deliberately spread the type of fellowship offered very broadly...The basic philosophy has been to improve the broader culture of research within Trent RHA's borders,

and to increase the number of professional academics with an interest in health services research. The scheme is too early to monitor any outcomes, but the take-up rate has been extremely encouraging".

Dissemination

38. Trent RHA produces an R&D newsletter, and organises or supports occasional seminars and conferences.

Databases

39. As well as a Project Register linked to the national system, Trent maintains a database of individual research interests, and another of external assessors.

Commissioned reviews

40. The report lists eight literature reviews commissioned during 1993-94.

Clinical Developments Programme

41. Trent RHA invites bids from providers wishing to bring research-based innovations into service. Successful bidders receive up to 50 per cent funding over two years, plus funds for independent evaluation.

Partnership with Purchasers

42. Trent also invites bids from purchasers wishing to conduct R&D, for "additional resources required to make that work more robust, generalisable or timely or to assist in the wider dissemination of the results", up to half the total cost.

Getting research into practice

43. Finally, Trent invites purchasers or providers to bid for support for "the establishment and evaluation of innovative schemes for the controlled implementation of clinical guidelines". This scheme is consciously modelled on Oxford RHA's "GRiP" initiative.

NORTH THAMES RHA R&D PLAN 1994-95

RDRD - Professor Andrew Haines, who gave us an outline of the Region's activities at Q1277
Medical Schools - Charing Cross and Westminster/St Mary's, St Bartholomew's/London, University College and Middlesex/Royal Free
Postgraduate institutes - BPMF, RPMS
R&D Budget 1995-96 - £10.1m. The combined R&D budget of NE Thames and NW Thames for 1994-95 (October-September) was £6.8m

Organisation

44. NE Thames and NW Thames RHAs merged in 1994. The new joint R&D Committee is chaired by Baroness Jay of Paddington. It has four working groups: Responsive Funding; Research Implementation; Education and Training; and Organisation and Management. It has inherited four further working groups from the old RHAs: Disabilities; Sexual Health; Mental Health; and Health of the Nation. R&D networks are being developed, to exchange information on R&D programmes, to assist implementation, and to inform the N Thames R&D project register. The register has details of all RHA-managed projects, and about 200 projects in the region funded from other sources, with more to be "captured" during the year.

NW Thames R&D programmes

45. N Thames has inherited four commissioned programmes from NW Thames:

- Mental health (£1m over 3 years) - 12 priority areas, 8 projects approved, 7 areas to be revisited

NORTH THAMES PROVISIONAL R&D BUDGET 1995-96 £000

Primary/secondary interface	2160
New N Thames programmes	
Responsive	1840
Organisation and management	800
Education and training	782
Research implementation	716
Continuing NET and NWT programmes	
Sexual health	590
Disabilities	535
Mental health	495
Health of the Nation	270
Genetics	200
Drug Centre	190
Health gain	100
Environment (pan-Thames)	50
Other	48
New priority programmes	667
Service support	200
R&D infrastructure	470
TOTAL	10113

— HIV/AIDS and sexual health (separate budget - £1m over 3 years) - 13 priority areas, 5 projects recommended

— Physical and complex disabilities (£1m over 3 years) - 8 priority areas, 6 projects approved

— Organisation and management (£0.5m) - 3 priority areas, including getting research into practice; 14 applications short-listed

46. NW Thames was also committed to funding the Centre for Research on Drugs and Health Behaviour (Charing Cross and Westminster); the Imperial College Chair of Community Genetics (Northwick Park) and the multi-disciplinary Genetics Forum; and some GP Research Fellowships (covering three sessions per week in academic departments of general practice).

NE Thames R&D programmes

47. N Thames has inherited from NE Thames the lead in the national R&D programme on the interface between primary and secondary care. 21 priorities have been identified, 24 projects recommended for funding so far, and £6m committed over five years. NE Thames also bequeathed a programme of commissioned research in Health of the Nation priority areas; nine projects have been funded so far.

48. Other NE Thames activities included:

— Systematic reviews, including one as part of the Cochrane Collaboration;

— The appointment of part-time R&D/Audit Co-ordinators, to inform clinical audit with research findings in five areas;

- Clinical Effectiveness Workshops for purchasers;
- "Consumer research" - a project on patients' influence on pregnancy and childbirth services has been funded;
- Funding of two projects on ways to recruit more patients to clinical trials;
- Critical appraisal courses, based on courses developed at McMaster University in Canada, and a research training fellowship jointly funded with the MRC.

Environment

49. The Pan-Thames Environment Group was set up by all four Thames RHAs in 1993, to commission health services research on environmental issues, with a budget of £100,000. Two one-year projects on air pollution and respiratory health have been funded.

Responsive funding

50. N Thames inherited from NW Thames a Standing Working Group providing responsive funding for health services research, and from NE Thames a Locally Organised Research Scheme whose traditional slant towards clinical biomedical research was being shifted in favour of health services research with demonstrable prospects of benefit to the NHS and to the Region. The new N Thames scheme is committed to "investment in applied health services research", and to "no longer supporting projects which are biomedical and where the application to the NHS is not clear". A Project Development Group advises bidders who need help with project design. Proposals are fully costed, including excess service costs and institutional indirect costs, and the scheme meets these costs "if they are justified". The plan lists eight projects approved since May 1994; it envisages 25 projects being funded by January 1995.

Education and Training

51. The N Thames Education and Training Group plans to "improve the research base for health services research, particularly but not only within the nursing and other health professionals' fields", by means including:

- fellowships and studentships;
- in-service training;
- training in systematic review;
- appointment of a Curriculum Development Officer, to raise the profile of research and critical appraisal in professional education;
- pump-priming funds for courses "to inform about R&D";
- a feasibility study on linking postgraduate libraries to JANET and the Internet, to provide access to the Project Register System and the databases of the Cochrane and York Centres.

Research Implementation

52. N Thames is building on the work of the NE Thames Research Implementation Committee, which funded projects on getting research into practice, including pilot projects and evaluations. The new N Thames Research Implementation Group will support further projects; commission reviews to identify findings ripe for implementation; examine effective strategies for implementation; and seek to involve the Region in national programmes of implementation, and in the Cochrane Collaboration.

53. N Thames RHA is taking the lead in the CRDC's national programme of research into ways to get research into practice; six members of the RHA Working Group are also members of the CRDC Advisory Group.

Organisation and Management

54. NW Thames RHA set up an Organisation and Management Working Group, which began to work towards commissioning research into "organisational and behavioural" aspects of change in outpatient services, implementation of research findings, and community services and length of stay in hospital. Their work on implementation has been subsumed by the new Research Implementation Group (see above); and N Thames has set up its own Organisation and Management Group, to commission evaluation of service innovations, including those arising from the re-organisation of primary care in London, on which both former Regions were already working.

Service support

55. N Thames has budgeted for excess service costs arising from MRC research, in the light of the Concordat.

SOUTH AND WEST RHA R&D REPORT AND PLAN 1994

RDRD - Professor Stephen Frankel
Associate Director of R&D - Stephen Holgate
Medical schools - Bristol, Southampton
R&D budget 1994-95 - £5.023m
This report contains no financial information

Priority-setting

56. South and West's R&D priorities are informed by consultation with all local purchasers, and the Regional Executive, conducted by the former South Western RHA in January 1994; task forces/working groups on the primary/secondary care interface, public health (including health promotion and sexual health), mental health, mother and child health, primary dental care, cancer, nursing, the interface with social services (a joint group with Directors of Social Services), and organisation; the Regional R&D Advisory Committees; and workshops on the national priority areas of cancer, mother and child health and primary dental care.

Support for research and implementation

57. The RHA has established R&D Support Units in each health commission area, "to provide the expertise and analytical capacity to encourage high quality and appropriate research, as well as the implementation of research, throughout the service". To fill a particular gap in the R&D infrastructure, R&D General Practices are being identified (up to ten in 1994-95): these practices will receive funds to enable one or more of the GPs to conduct health services research, and to support that research. Research networks have been set up and supported, to encourage collaboration, training and informal interaction.

58. The RHA funds excess service support for certain major clinical trials funded by the MRC and other bodies (so far, six MRC trials and one UKCCCR study).

59. South and West's Education and Training Grants Scheme provides bursaries for taught courses in research method, studentships for PhDs, and fellowships for postdoctoral research. In 1993-94, 64 awards were made, as follows:

	Doctors	Nurses	Allied professions	Other
Bursaries	1	25	15	8
Studentships	2	5	2	4
Fellowships	1	0	0	1

60. Research Training Days have been held around the Region; the seven held in 1993-94 were all over-subscribed. South and West is collaborating with Oxford and Anglia RHA to run critical appraisal workshops, initially for purchasers.

61. The RHA maintains a Project Register System and a relational database of individuals interested in R&D, and produces an R&D newsletter.

Implementation

62. The RDRD has met all local purchasers "to discuss the practical ways in which R&D can be used in their purchasing plans"; and has issued a list of eight "interventions where there is evidence of effectiveness", and six "areas where there is evidence of ineffectiveness". The report highlights actions taken by Dorset Health Commission, which has set up an R&D Office to see that the findings of research reviews are implemented, and a Clinical Effectiveness Forum where the purchasers can discuss "effectiveness issues" with clinicians, and is imposing guidelines, protocols and audit of outcomes on its provider Trusts.

63. The RHA produces *Evidence-based purchasing: a selection of new material*, an annotated list of new information about effective practice circulated every two months to purchasers; occasional briefing papers on particular interventions (four in 1993-94); and commissioned literature reviews (four in 1993-94, ten in 1994-95). Further reviews are conducted by the Development and Evaluation Committee, "a collaborative partnership between R&D and Public Health".

64. "Audit can provide a vehicle for implementation. For example, as a direct response to the publication of Briefing Paper No. 1: The use of steroids before pre-term delivery, a multi-district audit has been initiated to examine current practice".

65. The RHA has held seminars, "providing a 'neutral zone' where purchasers and providers, clinicians and managers, research workers and research users, can collaborate to determine mechanisms for introducing research evidence in practice which are suitable, feasible and acceptable". Finally, the RHA is funding two research projects into ways to get research into practice.

Development

66. South and West is funding evaluation, through the Developments in the Organisation of Care Scheme. Seven projects have been funded responsively, and two priority areas for commissioned work have been identified.

Research

67. In 1993-94, South and West commissioned R&D as follows:

- Primary/secondary care interface - one project
- Public health, health promotion and sexual health - eleven projects, three reviews
- Outpatients - four projects, one review
- Effectiveness, cost effectiveness and acceptability - fourteen projects, some funded jointly with other Regions or the MRC

68. Proposals are being considered in the further areas of mental health, mother and child health, primary dental care and nursing; and the RHA is considering funding some projects submitted from within the Region to the national programmes on primary/secondary care and physical and complex disability but not shortlisted.

69. Responsive funding was awarded in 1993-94 to 22 projects, plus a further 6 small grants.

NORTHERN AND YORKSHIRE R&D FORWARD PLAN, JANUARY 1995

RDRD - Professor George Alberti (until September 1995), who gives an overview of his activities at Q1268
Associate DRD - Professor Ian Russell
Medical Schools - Leeds, Newcastle
R&D budget 1994-95 - £6.8m
This plan is written in the light of the outcome of the NHS Functions and Manpower Review. It contains no financial information, nor lists of projects.

Organisation

70. The organisation of R&D in Northern and Yorkshire RHA is in flux. Two part-time Associate RDRDs are to be appointed to support Professor Alberti. An R&D Advisory Committee, a Research Liaison Group, and expert working groups on Health Services Research, Biomedical Research, Primary and Community Care Research, Education and Training and Information Services are to be established.

71. All RHA-funded research will be project-managed. This will involve plans, contracts, agreed costs, milestones, timescales and progress reports.

72. The RHA already supports networks of "research facilitators" or "R&D Representatives" within purchaser and provider units. Their role is to be evaluated. Meanwhile it is envisaged that "non-executive directors...will be invited to become champions of R&D issues. It will be their task to ask questions about the relevant knowledge, and appropriate research considerations of the main decisions considered by organisations". Understanding between practitioners and researchers will be fostered through joint forums, sabbaticals, exchanges, secondments and collaboration; and the RDRD will meet the Pro-Vice-Chancellors of the local universities every three months.

73. The regional R&D programme is itself to be audited, using "process" and "qualitative" measures.

Priorities

74. Northern and Yorkshire RHA is leading the national R&D programmes on mental health and cardiovascular disease and stroke, and is to take the lead in new programmes on diabetes and nutrition. Otherwise, "funding decisions will be based on purchasers' priorities", which consultation has shown to be:

- — clinical effectiveness;
- — acute sector growth;
- — primary/secondary care interface;
- — evaluation of new developments;
- — organisational change to improve contracting; and
- — evaluating total fundholding.

Getting research into practice

75. An Implementation Working Group has been established to look into ways to get research into practice. The R&D and Public Health Directorates jointly run a Protocols and Guidelines Group, and the RHA will review the performance of purchasers in applying R&D results. Purchasers' requirements for research evidence to inform contracting are to be the subject of a study.

Training

76. The Training and Education Group will continue to offer Research Training Fellowships, including some funded jointly with the MRC. They will plan "specialist workshops to disseminate information on effective treatments", and "innovative ways of removing the cultural barriers to research".

Information

77. A local R&D Information Strategy is to be produced, including the tracking of research activity within Trusts.

SOUTH THAMES STOCKTAKE JANUARY 1995

RDRD - Professor Terry Stacey
Medical Schools - King's College, Guy's and St Thomas' UMDS, St George's
R&D Budget 1994-95 - £5.0m

Commissioned research

78. The report lists 22 South Thames projects funded by the CRDC, and 13 projects commissioned or continuing during 1994 funded by the RHA. South Thames continues to contribute to the Pan-Thames Environment Group (see North Thames). A new Regional R&D Committee has been formed to set priorities for commissioned research.

Responsive funding

79. South Thames established a new Project Grant Scheme in 1994, with a budget of £750,000 for 1994-95 and £1m for 1995-96. Projects must be relevant to the NHS, and relevance to national and regional priorities is taken into consideration. University researchers without an NHS contract may apply; both biomedical and health services research are funded. Funds are allocated by the RDRD, with help from a single Scientific Advisory Panel. The report lists 37 grants made between 1993 and 1995. The Scheme has a training function: inexperienced applicants are required to have a supervisor, unsuccessful applicants are offered advice, and free statistical advice is available from a team who also advise the RDRD on the statistical content of project proposals.

Project Register System

80. "A number of databases are being established, and these will be further developed when the staffing complement in the Office is complete".

Education and training

81. A Research Education and Training Sub-Committee of the R&D Committee has been set up. "It is proposed that support will be offered to a network of research teams throughout the Region to provide advice and support for new researchers, especially in relation to protocol design. This will include qualitative as well as quantitative methodologies". South Thames offers 12 two-year Research Training Fellowships each year, half reserved for non-doctors, plus a 2-3 year Training Fellowship in Health Services Research co-funded with the MRC, and another at the Jocelyn Chamberlain Unit for Research into Health Promotion. South Thames is collaborating with North Thames to encourage training in systematic review.

Research infrastructure

82. Under this heading, the report refers to RHA-funded posts (a new post is mentioned: a lectureship in medical physics at Surrey University, to "increase the capacity to research novel applications of new developments in the use of MRI in the investigation of common diseases in collaboration with medical staff throughout the Region"); SIFTR; the group at St George's funded by the RHA to lead the Cochrane review of asthma and obstructive airways disease; the South Thames Institute of Public Health, the Health Care Evaluation Unit, the Jocelyn Chamberlain Unit and the Unit for Research into Pharmacy Practice, all supported by the RHA; research funded from other RHA budgets, including AIDS and Primary Care; and the role of the R&D Office staff in liaison, brokerage and advice.

Getting research into practice

83. South Thames is to appoint a Project Officer and a sub-group of the R&D Committee to promote implementation of research results, and is commissioning two research projects on variation in professional practice.

Networks

84. Every NHS organisation in South Thames is to have a "lead R&D officer" as a point of contact with the R&D Office and a Regional R&D Conference is planned for 1996.

APPENDIX 9

Department of Health-funded Research Units

1. Part of the Department of Health's centrally-commissioned programme of R&D consists of long-term funding of the 13 Research Units listed in the Table. The Units were mostly established or adopted in the 1970s. They are funded on the Rothschild principle on the basis of six-year rolling contracts with in all cases but one (the National Institute for Social Work) a university. Each Unit's first priority is project work commissioned by the Department, but it may take commissions from other sources, and may devote 10 per cent of its core funding to curiosity-driven research. Some Units receive support from charities. The Units vary in history, size and degree of dependence on the Department of Health. Some staff have university or honorary NHS positions.

2. The Department's relationship with the Units is the responsibility of the Director of R&D. In 1991 Professor Peckham commissioned a general review, by a group chaired by Dr Peter Williams (former Director of the Wellcome Trust). The group reported in March 1992. The review was conducted against the background of the new NHS R&D Strategy, and changes in the universities including the dual support transfer and the split between teaching and research.

3. The group found "that the structure of units fails to provide a cohesive framework for future work, and that there is a need for strategic planning". Six-year rolling contracts did not give the Units sufficient security to attract, train and retain the best researchers; the group observed that this was unfortunate, given the current demand for high-quality health services research. The group also identified unsatisfactory relationships between "policy customers" in the Department and the Units, and, on matters of administration, between the Units and their host universities.

4. The group recommended that DH funds currently spread over the 13 Units should be concentrated on three or four larger interdisciplinary Research Centres, hosted by universities, with funding for ten years rather than six. The Centres would be identified more closely with their universities than are the Units, and less dependent for day-to-day management on the Department. Liaison with departmental policy customers would be improved, with a view to diverting demands for intelligence-gathering and analysis away from the Centres and encouraging instead the formulation of genuine research questions. The Centres would offer more training (MSc courses, studentships and fellowships) and a better career structure than the Units. Those existing Units which did not evolve into Centres might be adopted by a university department or an RHA.

5. Following a series of expert reviews, the Government announced on 12 January 1995 (DH Press Release 95/17), "The outcome of all visits is favourable and Department of Health funding will continue. The future of the units will be secured by agreeing a long term programme for each and, at the same time, creating opportunities for all directors to tender competitively for additional research commissions". The Units are currently receiving new 5-year contracts, providing "5-year funding for core staff with the possibility of reapplication". Meanwhile, building on the existing Centre for Primary Care Research, an interdisciplinary National Centre for R&D in Primary Care has been established at Manchester University, in collaboration with the Universities of York and Salford, with funding of £1.5m per annum for 10 years (Q38).

6. The Department of Health considers (p369) that these arrangements provide for "a more satisfactory career in health and social services research". Departmental funding will include provision for studentships and fellowships, higher degrees, taught courses and attendance at conferences.

NAME	LOCATION	FUNDING BEGAN	DH FUNDS 1991-92 £000s	STAFF 1992	REMARKS
Cancer Screening Evaluation Unit	Sutton	1978	375	14	
Centre for Health Economics	York	1971	301	41	
Childhood Cancer Research Group	Oxford	1975	333	24	Epidemiology of child cancers. Grew out of a university department.
Clinical Operational Research Unit	London	1990	299	7	Scientific evaluation and audit.
Dartington Social Research Unit	Bristol	1971	290	10	Research on children and families at risk.
Medical Care Research Unit	Sheffield	1973	591	26	Health technology assessment. Substantial support from Trent RHA.
National Institute for Social Work	London	1970	354	13	No link with university.
National Perinatal Epidemiology Unit	Oxford	1978	478	36	NHS location; close links with NHS. Dr Chalmers, Director of Cochrane Centre, was formally Director of NPEU.
Personal Social Services Research Unit	Canterbury	1974	1049	29	Research on community care of elderly.
Social Medicine and Health Services Research Unit	London	1970	901	61	Epidemiology, statistics, social science.
Social Policy Research Unit	York	1976	365	34	Originally set up by the thalidomide Family Fund. Substantial project funding from DSS.
Thomas Coram Research Unit	London	1972	549	29	Research on children and families.

APPENDIX 10

Research in newer disciplines and settings

A. RESEARCH FOLLOWS THE PATIENT

1. It is a theme common to the NHS R&D Strategy and the Culyer report that medical research must follow service delivery out of the big hospitals and into the GP's surgery and the community, the territory of "primary care"; and out of the exclusive control of hospital doctors, to involve GPs, nurses, therapists and other professions allied to medicine. This is generally considered to be both inevitable and desirable (COSHEP Q992; Boyd p180; BMA Q1373; Swales p255, Q854; NAHAT Q923; RCN p331; RCM p339).

2. SCOPME comment (p471), "There is a danger...of moving some types of research into fewer more "hi-tech" hospital, separating it from education and training that may increasingly take place within a community setting. These issues need to be considered further, but it should be possible to create the same ethos of enquiry, critical appraisal and research in any clinical setting". The HEFCs caution (Q1333) that academic activity is not shifting into the primary sector as fast as clinical services, and that therefore writing off the teaching hospital prematurely could damage education and research.

3. Several witnesses put it to us that medical research should be essentially and increasingly mulitdisciplinary. The RCN (p329) reports that collaboration is on the increase, but that local pockets of resistance are to be found. Professor Jane Robinson (p336) observes that the 1992 Research Assessment Exercise militated against collaboration between different "units of assessment". Professor Robert Boyd enumerated some of the difficulties of assembling a multidisciplinary research team: salary differentials, variations in career security and esteem, hostility towards doctors and medical models, "subject-based prejudices and protectionism"; "We have got a long way to go in getting the different professionals involved in health services research to feel confident in working together" (Q538, p180).

4. Professor Maggie Pearson added that there are as yet too few competent researchers in the non-medical professions. "This is not a criticism of the professions. I think the professions have come a long way in getting into higher education and developing knowledge-based practice. I would not doubt at all the quality of the researchers that there are, but I would like to see more...I think it is just a matter of time and support to develop research" (Q539, cp RCGP Q415). Funding for training fellowships is hard to come by; and "It is much more difficult for the professions other than medicine to combine clinical practice and an academic career; in fact it is well nigh impossible" (Q541).

5. The Royal College of Nursing (RCN) observes (p333), "When patients are moved from NHS locations to nursing homes, to social services and home, it is not clear...who gives permission to approach the individuals [for research purposes] and what mechanisms exist to receive ethical approval. The RCN believes that guidance on this topic will become a matter of some urgency".

Primary care research in the NHS R&D Strategy

6. The AUDGP (p428) consider that the top-down structure of the NHS R&D Strategy has had the effect of giving more attention to the problems of secondary care, and less to primary care and "the incorporation of patient and consumer perspectives...Although the strategy has opened some doors to funding [for primary care research], its implementation has been patchy. This is often related to the preoccupation of individual RDRDs". The Royal College of General Practitioners (RCGP) agree (Q398); they attribute the problem to lack of primary care representation on Regional committees; they call for primary care research to be separately identified in the accounts of the Strategy, though they admit that there are problems of definition.

7. As an example, the AUDGP point to the new Manchester Centre for Primary Care R&D: "The AUDGP welcomes any new support for research in general practice, but is concerned that the thinking behind the establishment of the Centre may have been extrapolated from biomedicine rather than from the principles of general practice. It is possible that the Centre may not yet be able to deliver all that is expected from it because of lack of research infrastructure in the discipline. It is certainly not possible to answer all questions about primary care or to train sufficient research staff on a single site". The RCGP agrees (p130). On the other hand Sir Leslie Turnberg (Q875) considers that research in primary care and the community benefits from direction; without it,

money and ideas can be squandered by being scattered too wide. Professor Robert Boyd, the new Centre's Chairman, stands up for it (Q519): "It is a good departmental initiative".

8. The Scottish Chief Scientist believes that his version of the R&D Strategy has been good for the primary sector (Q1137). "The evidence is that, since the R&D document and the Strategy have been announced, there has been an improvement in the quantity and quality of research being undertaken from the teaching [GP] practices".

Peer review

9. The Culyer report, in a section headed "Peer review" (paragraph 3.87), says, "Research is developing outside traditions of peer review in areas where a knowledge-based culture needs to develop further. Primary and community care, nursing and other professions will gain importance as health care focuses on degenerative diseases and disability, and shifts towards the community. The NHS will need research skills, groups, and links with research centres to develop effective high quality care in these areas. A premature insistence on peer review could stifle this research, though appropriate peer review in these fields should be the longer term objective".

10. Several of our witnesses are opposed to the idea that research in emerging areas should be exempt from peer review. "GPs must compete for research funding on the same basis as others in the NHS and universities...primary care researchers themselves will have to compete for local and national project and programme research grant funding in open competition with others" (AUDGP p429). "Public money should be spent on the basis of rigorously-reviewed applications" (RCGP Q396) - "Same principles, same standards" (Q417). "The suggestion in 3.87 that [peer review] could be bypassed for primary and community care projects is totally contradictory to statements throughout the [Culyer] report about ensuring that only quality R&D is funded" (p442).

11. Professor Culyer stands by the recommendation that what he calls the "Cinderella disciplines" are "too underdeveloped to take the full rigour of peer scrutiny" (Q518). Professor Maggie Pearson rejected his terminology but agreed with his proposition: "In what I would describe as the rapidly developing research areas in the NHS R&D strategy, there is great enthusiasm for research where there was not hitherto, and we have to be careful not to dampen that by having an overly heavy, censorious atmosphere. I think there are very supportive mechanisms by which people interested in developing research can be prevented from doing poor quality research and getting disheartened, by having peer review mechanisms which may involve some component of mentorship, where they can be advised on where their research designs can be improved and then given some funding to develop it...Otherwise, what we will do is dampen the enthusiasm in precisely those areas we want to encourage".

B. GENERAL PRACTICE

What is GP research?

12. "In general practice research the sciences of discovery meet the sciences of implementation". The scope and potential contribution of research in general practice is well described in the evidence of the Association of University Departments of General Practice (p427). It focusses on conditions largely encountered or managed in the primary sector (eg mental illness, hypertension, depression, asthma, diabetes - QQ384, 422); on the configuration of primary care services; on epidemiology; and on the behaviour and responses of patients. The RCGP utters a warning (p132): "General practice is at risk of being seen only in relation to the secondary care services, eg the gatekeeper role or as an early discharge agency...General practice needs research in its own right...the elucidation through research of the nature and best means of developing these core aspects of general practice, for example primary assessment, early diagnosis, domiciliary care, family care, and continuity of care, is of increasing importance". GP research follows "a people-intensive paradigm rather than a machinery one" (Q410); and multi-disciplinary research is "the model rather than the exception" (Q391).

13. Research in general practice has an honourable history going back into the nineteenth century and even earlier (p126). However academic general practice is a recent development, which has only achieved "critical mass" in the last 10 years (Q419). Professor Denis Pereira Gray, RCGP Chairman of Research, told us, "We have changed the culture from something where there was an anti-intellectualism in general practice, alas, to a more neutral position".

14. The College considers that research *on* general practice should be substantially conducted *in* general practice: "There are many nuances in patterns of behaviour, the interpretation of GP records, and the significance of what was not done, which can only be fully appreciated by those clinically proficient in the field" (p133).

Support for research in general practice

15. Every medical school but two now has a department of general practice, and such departments either run practices from the department or have close links with practices outside. Besides these "academic practices", other practices may be involved in teaching undergraduate medical students, or leading or participating in research. General practices involved in teaching and research are not eligible for SIFTR (though, according to the Culyer report, Appendix G paragraph 27, some SIFTR funds have "found their way" to general practice). Pending an extension of SIFTR, academic general practices have since 1992-1993 received support totalling £2m per year from the Department of Health through the RHAs in the form of "tasked money"; but according to the RCGP (QQ353-8) the amount is "tiny", distribution is unsatisfactory, and "some departments have had great difficulty in prising the money out of their regions". The AUDGP adds that this funding is not secure (p427, cp Q991). Similar interim provision has been made for academic general practice in Scotland, with money taken from ACT (QQ987, 991).

16. The only public funding currently available for service support of academic activity by GPs not associated with a university department is £12 per session spent teaching: as Professor Roger Jones of UMDS put it (Q364), "GPs are teaching for love and not for money in those circumstances". According to the AUDGP, "At present there is no slack in the system, and GPs are unable to take on new tasks" (p428). From April 1995, GP fundholders will be permitted to use their savings for research (p134).

17. The MRC co-ordinates a GP Research Framework, involving 900 practices (Q102, p68). According to the RCGP, "The GPs involved in the Framework tend to be, with their practice nurses...data-collectors rather than initiators of research" (Q342).

18. The Royal College of General Practitioners put to us the case for increased support for research in general practice (pp121-150). The College itself supports two GP Research Units (in Birmingham and Manchester); the RCGP Scientific Foundation, which though small is the largest charity funding exclusively GP research; the Medicines Surveillance Organisation, which monitors drug use and safety in the NHS; two "research general practices", in receipt of core funding since 1994 with a view to creating "an organisational equivalent in general practice to the teaching hospitals"; and some part-time research training fellowships, generally used to support work towards an MD.

19. The College points out that the importance of general practice to the NHS is high and rising for a number of reasons, including the increases in day surgery, early discharge from hospital and the range of conditions managed entirely in the community, including mental illness. The NHS is now talked of as being "primary care-led". What is more, "As the challenge of effective and efficient purchasing in the NHS develops, so the research question of what exactly are the needs of patients registered with general practice grows. GP teams...are best placed to research this question. Researching needs is likely to become more important than researching activity in the NHS". Yet, in the College's view, general practice research is the poor relation among the specialties; and the NHS R&D Strategy "has been focused on secondary care, and general practice has not yet been given the research attention the College thinks it deserves".

20. The College recommends that:

- the other NHS Regions should follow the example of South and West, and of the College itself, and offer core funding for "research general practices" (QQ372-380; the BMA agrees - p406);
- each Region should offer 12 research training fellowships to GP trainees, and 24 to GP principals, mostly part-time (2-4 sessions), to do for GPs what senior registrars' protected study time (2 sessions) does for hospital doctors; the College believes that this would cost around £500,000 per Region per year, and that "a large number of very able doctors are without training opportunities at the moment" (Q348);

— the RDRDs should provide regular courses in primary care research skills, and small project grants;

— as recommended by the Culyer report, and in contrast to SIFTR, research facilities funding should be available to general practices (the AUDGP agrees - p429); and

— GPs on the staff of university departments of general practice should be eligible for distinction awards, as are all other clinical academics (Q429, p133; the BMA agrees - Q1387).

21. Professor Peckham and the MRC agree (QQ23, 104) that there is room for improvement in the research capacity of non-academic general practice. When it comes to funding, there is arguably a difficulty over provision of funds for research facilities to GPs working in the community (Peckham Q23, BMA p406). The RCGP does not see this as an insuperable problem (Q425), particularly since most GP research will take place in association with a university department; the MRC suggests channelling the money through the MRC (p64).

22. The DHSS(NI) earmarks one of its Clinical Research Fellowships (see Appendix 13) each year for a GP. However "the number of applicants is really very small and the quality of the applicants is not as high as we would like" (Q790).

C. THE NURSING PROFESSIONS: NURSING, MIDWIFERY AND HEALTH VISITING

23. There are three nursing professions: nursing, midwifery and health visiting. In the time available we were able to meet representatives of only one of them, a team assembled by the RCN.

What is nursing research?

24. Professor Alison Kitson, Director of the National Institute for Nursing, described for us the scope of nursing research (Q1224) as being typically concerned with rehabilitation or the care of the chronically ill. "Nursing research...has to have a very strong clinical and practice focus". The following breakdown of 250 randomised controlled trials is instructive:

Patient teaching	57
Midwifery	38
Nurse education	35
Peri-operative care	18
Pain management	<9
Critical care	<9
Incontinence	<9
Pressure sores	<9
Infection control	<9

25. Professor Jane Robinson of Nottingham (p335) regards clinical research as one of four categories of nursing research. The others are research into the professions "as social, political, economic and practice phenomena in their own right"; multidisciplinary health services research with a nursing element; and research into nurse training.

Careers in nursing research

26. Dr Senga Bond, Vice-Chair of the RCN Research Advisory Group, described four ways for a nurse to become a researcher (Q1226):

— by joining an academic department of nursing;
— by working in a nursing research unit;
— by receiving R&D training through the NHS R&D Strategy;
— through involvement in biomedical research.

27. Since 1967, the Department of Health has offered each year three Nursing Research Studentships, for full-time study for MPhil or PhD; and one Post-Doctoral Nursing Research Fellowship. Further studentships are being created through the R&D Strategy, including some funded jointly by the NHS and the MRC. It is a disincentive to research training that the typical nurse candidate is already in a career grade, and earning significantly more than a student grant. According to Dr Bond (Q1265), "At the moment there are training opportunities which are not

being taken up...We still have a very small number of nurses who are at the level of academic performance to be able to use the research training opportunities; the danger is trying to do too much too quickly".

28. Thanks to the recent rapid absorption of schools of nursing by universities, "It is easy to get an academic nursing appointment if you have a PhD" (Q1227). However without postdoctoral experience, and with a heavy load of teaching and curriculum development, nurses in academic posts are finding it difficult to develop research (cp p336). Real research posts tend to depend on project funding, producing a level of "contract hopping" which is "not particularly comfortable" (QQ1258, 1265). According to Professor Robinson (p338), "an inverse relationship exists between the possession of sophisticated research skills and the level of remuneration which such staff receive".

29. In contrast to medicine, nursing offers very little opportunity to build research into a continuing clinical career. Our witnesses regard this as a serious disadvantage (Q1251). They are attracted by the model of "research practices" proposed for GPs (see above; cp p329).

30. "The demand by nurses for post-registration graduate and postgraduate education which includes some element of research teaching is almost insatiable" (p337), fuelled by Project 2000 and new continuing education standards set by the UKCC. Our witnesses are agreed that there is an urgent need to decide the scale of the academic infrastructure required to meet this need, and how to pay for it (pp 332, 337). The RCN believes that there are 6-800 nurses with PhDs in the UK (Q1233), and estimates the need at around 5,000 (Q1259) out of a workforce of half a million.

31. The Royal College of Midwives tells us the same story (p339). "Midwifery has at the moment no more than a handful of specially trained researchers, all of whom have had to develop their careers in serendipitous and unstructured ways".

Funding for nursing research

32. The RCN team described two particular difficulties in getting project funds for nursing research. First, though there are cases where a medical research project would benefit from nursing input (Professor Kitson gave an example - Q1240), the project leader may fail to notice this opportunity until it is too late to seek the funds to exploit it. Secondly, charitable support is limited, and hard to attract without an established record (Q1246).

33. As for core funding, on the face of it nursing came badly out of the HEFCs' 1992 Research Assessment Exercise:

No. of Departments	Grade
0	5
3	4
2	3
7	2
17	1
Total 29	Average 1.7

34. Professor Sally Redfern of the Nursing Research Unit at King's College London, which achieved one of the 4s, commented (Q1248): some of the new departments of nursing were ill-advised to enter the exercise at all; some nursing research takes place in multidisciplinary settings and is therefore not identified as such by the RAE; and three important nursing research units did not feature in the RAE at all.

35. The position of nursing research is one of the many ambiguous features of SIFTR (see Appendix 4). The amounts and allocations of SIFTR are not related to nurse education or nursing research at all, despite the shift of nurse training into the university sector (p331). Once SIFTR reaches the hospital, there is no reason in theory why it should not be used to underpin nursing research; but in practice, according to Dr Bond, "Anyone who is trying to conduct nursing research in mostly teaching hospitals and seeks a portion of SIFTR to assist in the funding is given pretty short shrift" (Q1253).

The Webb Report: A Strategy for Research in Nursing, Midwifery and Health Visiting

36. In April 1992, the NHS Director of R&D and the Chief Nursing Officer set up a Task Force on research in the nursing professions. The context for the Task Force consisted of the NHS R&D Strategy, the Strategy for Nursing, and existing strategies for nursing research in Scotland, Wales, Northern Ireland, Canada and the USA. The Task Force was chaired by Adrian Webb, Professor of Social Policy at Loughborough University; the members were four researchers, a Regional Chief Nurse and the General Secretary of the RCN. They were asked to consider the nature of nursing research, and how to set priorities, conduct research, train researchers, and get the research into practice. They reported in May 1993.

37. The Task Force traced nursing research in the UK back to charity-funded work in the 1950s. The DH[SS] has sponsored research since 1968, and now funds two units (the National Perinatal Epidemiology Unit in Oxford and the Medical Care Research Unit in Sheffield), commissioned programmes and projects, research training awards (see above) and a research database; but the Task Force considered this investment too small for the need. Much nursing research until now was small-scale, discontinuous, poorly disseminated and not generalisable.

38. The Task Force saw nursing research as a branch of health services research, embracing nursing practices, nursing services and their delivery, the nursing professions and workforces and their training and deployment, health promotion, and service systems involving nursing alongside other professions. "The nursing professions have research priorities and agenda which differ in approach and detail [from other professions] and which extend beyond the interests of the NHS". Nursing research was neither the exclusive preserve of nurse researchers, nor the only area of health services research to which nurses could contribute; the Task Force stressed the value of multi-professional and multidisciplinary research.

39. The Task Force recommended that nursing research be made a full and equal partner in the NHS R&D Strategy. "Neither the managerial culture in the NHS nor the nursing practice culture has been sufficiently supportive"; this must be put right, through corporate contracts, audit and professional accountability. Rather than setting separate priorities for nursing research, all research priority-setting exercises should take account of the nursing dimension. "A nursing perspective often seems to be inappropriately presented or wholly absent from key bodies, the networks linking the nursing professions into the research world seem underdeveloped, and vital information on funding and training opportunities can be difficult to obtain"; henceforth, nursing should be taken fully into account by the NHS DRD and RHAs in establishing structures to set R&D priorities, disseminate findings and implement them, in manning committees, including ethics committees (the Task Force commended the composition of the CRDC), and in funding and managing research. RHAs should be accountable to the DRD for the place of nursing in their R&D plans. To get nursing research into practice, purchasers should involve nurse researchers in "the public health and contracting functions". The current network of Regional Representatives on Nursing Research, supported by the Department of Health, should be made "stronger and more authoritative".

40. The Task Force recommended that "the proliferation of inadequately supervised, small-scale projects should be curbed", and the present "inadequate and rather ad hoc" provision for postgraduate research training be improved. They acknowledge that other professions also needed more research training, but insisted that nursing warranted "special provision". They called for:

- — funding for MSc courses provided by the MRC and ESRC under their Concordats with the Department of Health;
- — DH-funded research training places in institutions which receive DH infrastructure funding for health services research;
- — DH-funded research studentships attached by open competition to centres of research excellence;
- — a fourfold increase in research training awards by 1996;
- — RHA-funded research training posts attracting G-Grade salaries, for nurses seeking research training in mid-career;
- — RHA funds for locum cover, to enable nurses to do research without quitting clinical practice ("The nursing professions are disadvantaged by comparison with parts of the medical profession in this respect");

- access for senior nurses to the ESRC Management Teaching Fellowship Scheme;
- RHA funds for "equivalent replacement" for academic staff taking advanced training, involving research method or interdisciplinary study;
- maintenance and eventual expansion of the DH postdoctoral research fellowship for nurses (currently one award per year).

41. The Task Force called for more high-quality nursing research, especially "stable, long-term programmes of work on the efficacy and efficiency of clinical, organisational and managerial practices". They recommended:

- a "coherent and high profile approach" to nursing research in the DH's centrally commissioned R&D programme and the work of its research units;
- scope for nursing research within Regional responsive research funding schemes;
- the proposed MRC Health Services Research Unit to be located at a centre of excellence for nursing research;
- wider awareness of the MRC Research Development Group, and similar Regional resources, to improve the success rate of applications for funds for nursing research from the MRC;
- an increase in the Science Budget to fund a programme of nursing research managed by the MRC and/or ESRC; and
- policies to attract commercial funding for nursing research.

42. Recognising that nursing researchers "are comparative latecomers to the higher education scene, and are having to struggle to advance the research cause in an inhospitable climate", the Task Force recommended that university departments of nursing should produce a development plan in the light of their report; should consider specialising in pursuit of excellent research; and should form close links with their Regional R&D and nursing structures. They also recommended that nursing should attract some form of SIFTR.

43. The Task Force detected a lack of direction in nursing research. They recommended that the professional bodies should get together with the relevant charities to speak with one voice in priority-setting for R&D.

44. The Task Force recommended that the NHS R&D Information Strategy should acquire a nursing dimension. The Department of Health should continue to fund the Index of Nursing Research and Midwifery Research Database; nursing research should feature in the York Centre's programme of reviews, and should be identified on the National Project Register; and a system, building on the Cochrane Centre, should be devised for systematic reviews of nursing research and the creation of research-based protocols.

45. The Task Force considered that "field testing of promising research findings" can only take place in "centres of excellence for the development of clinical practice". They recommended that each RHA should create and fund at least one such centre.

46. Finally, the Task Force proposed a new senior research award for nurses, midwives or health visitors, to be funded by the professional bodies and charities.

47. To accompany the Task Force Report, the RCN and the Royal College of Midwives published four one-page annexes for circulation around the professions, on Identifying R&D Priorities; Research, Education and Training (a summary of research training awards available to nurses from the Department of Health, MRC, ESRC and other sources); Dissemination and Implementation of Research Findings; and Careers in Research.

48. According to PA Consulting's review for the Nuffield Provincial Hospitals Trust, most of the recommendations of the Webb report are being implemented. The RCN has established a research prize; doctoral and postdoctoral fellowships are being funded; and RHAs have set up new academic centres of nursing in Leeds and Hull - "although there are difficulties with this initiative in that chairs need a supporting infrastructure, skills availability and funding to be successful". Yet

Professor Robinson reports (p336), "Our experience has been that the effects of the implementation of the Webb report have been neither as open nor as beneficial as the impact of the NHS R&D Division itself". She adds that, though the Webb report calls for research awareness training, the implementation of Working Paper 10 has made it "harder for nurses to obtain study leave to attend such courses, and for academic departments to obtain funding to staff them".

D. PROFESSIONS ALLIED TO MEDICINE

49. The professions allied (or supplementary) to medicine and self-governing under the Professions Supplementary to Medicine Act 1960 are chiropody, dietetics, medical laboratory sciences, occupational therapy, orthoptics, physiotherapy and radiology; art therapy, orthotics and prosthetics are expected to be brought under the Act shortly. Osteopathy and chiropractic are self-governing under separate Acts; and an indeterminate range of other professions and skills (eg speech and language therapy, art and music therapy) may also contribute to health care within or alongside the NHS. Some of these professions already have a research base; others are "ready to tackle research as a significant part of professional and clinical practice, now that they have become established within the state services" (*Art and Music Therapy and Research*, ed. Gilroy and Lee, Routledge 1995).

50. These professions were represented to us by witnesses assembled through the good offices of the Council of Professions Supplementary to Medicine (CPSM). They put to us a simple case: "First, the arrangements made by the NHS [for R&D] must create a level playing-field where all professions, and all universities, have fair and equal access to funds and applications are judged on their merits. Second, small professions must be able to get a foot onto the ladder, and their newness to the research community must not be used as an argument in itself to exclude them from it" (Q1298). The current trend towards care in the primary sector and in the community is bringing these professions out from under the shadow of hospital medicine, and most of them are now graduate professions, relying in many cases on the new universities to provide courses; but in research, "there is not much of a record at the present time" (Q1299). Dr Jean Potts, Chairman of the CPSM Physiotherapy Board, described for us what researchers in the therapies are doing, and listed the centres of excellence, which are mostly interdisciplinary and mostly supported by universities and hospital Trusts in collaboration; "a number of us were successful in the last Research Assessment Exercise in obtaining a quality rating of 2, which is pretty good, I think, for new professions" (Q1300).

51. The Department of Health offers each year three Research Studentships in physiotherapy, occupational therapy and speech and language therapy. Dr Pam Enderby, however, painted a gloomy picture of the prospects of a therapist with a bent for research (Q1304). Trusts have eliminated protected time and access to core funding for study and research; "most of the clinical therapists are asked to be clinicians only". Some RHAs and charities offer PhD/MPhil grants, but these are "very, very small and very sought after". In some places, therapists do not even have access to the medical library.

52. Dr Jean Potts, from the Institute of Health Sciences at the University of Northumbria (Q1319), was more optimistic. She gave examples from her own Region of Trusts funding academic posts in the therapies, "because of their commitment to developing research not so much in the profession itself but developing the service to patients and clients"; of good relations between the professions allied to medicine and the RDRD; and of Regional support for research training - though she admitted that "practitioners in the field are having considerable difficulty in getting the time off and funding to go on those courses". "Before the R&D Strategy we never had that sort of drive". She welcomed the proposed human resources strategy for NHS R&D.

E. HEALTH ECONOMICS AND STATISTICS

53. Professor Bouchier told us, "I think now it is almost impossible to get a health service research grant unless you have an economic aspect there" (Q1138); yet, according to Professor Maggie Pearson, "There is a national shortage of health economists", and of bio-statisticians and epidemiologists (Q541). According to Professor Culyer, himself a leading health economist, the Department of Health working with the ESRC has raised up some very well-trained health economists; but health statistics are insufficiently taught.

APPENDIX 11
Scotland

1. The Chief Scientist Organisation (CSO) of the Scottish Office Home and Health Department (SHHD) has supported research for the benefit of health services in Scotland since 1973. Successive Chief Scientists have been clinical academics, working only part-time for SHHD; COSHEP assures us that Professor Bouchier and his predecessors have commanded the full confidence of the research community (Q1031.). The Chief Scientist heads a small office (currently 27 staff), with a series of standing advisory committees composed of academics and staff from the NHS and SHHD. In 1994-95, the CSO disposed of around £11m.

2. The CSO funds research both reactively and pro-actively. About 75 per cent of CSO funds go to unsolicited proposals, on the basis of peer review and relevance to policy requirements; about 100 new grants are made each year. Mini-grants, up to £10,000, are available for "low-cost, opportunistic or feasibility studies" (p316). Other funds are directed by SHHD priorities, taking into account the strategies of other funders.

3. The CSO is not in the same position as the English DRD, Professor Peckham. For one thing (Q1119), he is not responsible for the R&D expenditure of the NHSME in Scotland; for another, he is not supported by a group of RDRDs; for another, no target has been set for Health Service expenditure on R&D (Q1125).

CSO PRIORITIES 1994

1. Quality of life of the elderly
2. Dependency
3. Disability assessment
4. Stroke
5. Community nursing
6. Nutrition
7. Drug abuse
8. Cancer services
9. AIDS
10. Clinical application of biomedical technology
11. Evaluation of health service provision and developments
12. Pharmaceutical services to patients with special needs
13. Other health services research

4. In 1993 the CSO took a higher profile than before and launched an R&D Strategy for the NHS in Scotland, aimed, like the English Strategy, at fostering a knowledge-based health service with a culture of evaluation. The CSO Corporate Plan 1993 implies that Scotland was already ahead of England in this field: "Much of the new structural arrangements proposed from the Department of Health [in *Research for Health*] bear close relationships to existing advisory structures within the CSO of the SHHD"; "an early CSO initiative had already [before the report of this Committee in 1988] defined the need to promote health services research, and this has paid dividends".

5. Following the report of a Health Services Research Committee Working Party in 1989, in 1990 the CSO launched the Health Services Research Training and Support Initiative. The aims were to support potential health services researchers; to draw more people into research; and to improve dissemination of research results at local level. The elements of the Initiative are:

- five "local research networks" (West of Scotland, Lothian and Borders, Fife, Tayside and Grampian), since reduced to four, funded or co-funded by the CSO until 1996, through which experienced researchers can advise potential researchers, research customers and users of research results;
- a small project grant scheme;
- an extended health services research training fellowship scheme (11 fellowships in 1990, 10 in 1993; "most go to nurses and a fair number go to GPs" - Q1140); and

— a National Co-ordinator, to develop annual training workshops and to co-ordinate the local networks.

According to the Corporate Plan, “this initiative is living up to its early promise”.

6. The Corporate Plan announced major programme grants in the following areas:

— disability (especially limited mobility, reduced self-care, incontinence, cognitive impairment and communication aids);

— community nursing, building on the Nursing Research Strategy for Scotland and the appointment of a full-time Nursing Officer in the CSO;

— cancer, through the establishment of a Cancer Therapy Network;

— cardiovascular disease; and

— the research requirements of Health Board purchasing.

7. The Plan announced the following steps to foster awareness of research throughout the NHS:

— funding for short courses to develop research awareness;

— extra funding to enable researchers on programme grants to provide consultancy to purchasers, providers and the SHHD;

— secondment of purchaser and provider staff to the CSO and funded units or programmes; and

— up to five 2-3 year full-time appointments to link academic centres with purchasers or providers.

8. In October 1993 the CSO published the R&D Strategy for the NHS in Scotland. The Strategy announces developments to the organisational structures set out in the Corporate Plan:

— *SHHD Strategy Group for R&D in the NHS* This Group, chaired by the Chief Scientist, will approve new priority areas for R&D, and establish indicators of the progress and success of the R&D Strategy.

— *Implementation Group* This larger Group represents purchasers and providers, to take the R&D Strategy forward.

— *R&D managers* Every Board and Trust is to appoint an R&D manager.

— *R&D plans* From 1995-96, every Board and Trust is to produce an R&D plan.

9. The CSO’s first annual report, 1993-94, describes a number of initiatives not foreshadowed in the R&D Strategy or the Corporate Plan:

— *New arrangements for health technology assessment* The Committee for the Healthcare Assessment of Technology has been merged with the Advisory Panel on Evaluation of Medical and Scientific Equipment and Health Service Supplies, to form a new Equipment Technical Evaluation Committee.

— *Novel health services* The CSO has earmarked £300,000 to fund, jointly with purchasers, evaluation of novel health service developments.

— *Directed funding* In addition to the five major programmes announced in the Corporate Plan, special research initiatives have been launched in the following areas: mental health, with particular reference to care in the community; behavioural and social roots of smoking; and general practice and nursing, where research expertise is to be fostered by means of workshop seminars and small project grants.

— *Nursing research* The CSO has decided to close its Nursing Research Unit, and to set up a new multidisciplinary nursing research group, as "a unit without walls". See Q1137.

— *Consultation on priorities* The report announced "a systematic consultative exercise to identify key R&D needs and to agree clearly defined priorities". This has now happened (p316); on the whole it affirmed existing priorities; the only new priority to emerge was telemedicine.

CSO RESEARCH GRANTS BUDGET 1993-94 £000

Health services and public health	4,860
Acute healthcare	3,040
Disability	850
Novel health services* and cancer	500
Equipment evaluation	200
Health assessment of technology	150
Pharmacy	70
GP shadow budgets	60
TOTAL	9,730

* A further £160,000 was allocated during 1993-94.

RESEARCH UNITS FUNDED BY CSO

Health Services Research Unit*
Health Economics Research Unit*
Public Health Research Unit*
Research Unit in Health and Behavioural Change (co-funded with ESRC and Health Education Board for Scotland)
Dental Health Services Research Unit
Institute of Hearing Research (co-funded with MRC)*

Those marked * were reviewed during 1993-94.

10. Scotland is integrated into the Information Strategy developed as part of the NHS R&D Strategy in England (Q1133, p316). The CSO co-funds the Cochrane and York Centres and the Project Register, publishes its own annual Health Service Research Register, and is to appoint an Information Manager to lead dissemination.

11. The Scottish equivalent of SIFTR is the Additional Cost of Teaching (ACT). ACT in 1994-95 amounted to £94m, or £42,362 per medical student, which is 15 per cent more generous than SIFTR. ACT is calculated and distributed similarly to SIFTR, except that the figures for student numbers used to distribute ACT among the teaching Health Boards include postgraduate students (p315), possibly by mistake (Q1159). Academic departments of general practice receive £1,020 per final-year student out of ACT, amounting to £622,000 in 1994-95. Dental hospitals each receive a separate lump sum, amounting to £10.85m in 1994-95. There is no Scottish equivalent of non-SIFTR or the central subvention for the SHAs.

12. The SHHD has not hitherto attempted to disaggregate ACT between teaching and research (p315). However, in the light of the Culyer report, they are now discussing how to identify the research element, and how to distribute it. The CMO indicated (Q1141) that it is intended to produce a compatible system, if only for the sake of the MRC and other national funding bodies.

APPENDIX 12
Wales

1. In December 1992, the Welsh Office Health Department published "Sharpening the Focus: R&D Framework for NHS Wales". An Office for R&D and an R&D Forum were established in May 1993; Professor Ian Russell was appointed as Director of R&D; an initial set of research priorities was identified and calls for proposals were issued (p6). The first programme of NHS R&D projects was not announced until March 1995 (p480); according to press reports, the Secretary of State for Wales took a personal interest in the selection of projects.

2. In the mean time Professor Russell resigned, moving to a post in York. This prompted a review of the Office of R&D. It is intended to relocate the Office within the Welsh Office during 1995-96, and then to re-advertise the post of DRD, which is being filled on a temporary basis by Professor L K Borysiewicz of the University of Wales College of Medicine.

APPENDIX 13

Northern Ireland

1. In Northern Ireland, the Department of Health and Social Services supports research in various ways, accounting for about 0.7 per cent of expenditure on Health and Personal Social Services (HPSS) (QQ743, 780).

2. The *Clinical Research Fellowship and Grant Scheme* promotes clinical research and enables clinicians to undertake research related to their practice, training or career. It is overseen by the Clinical Research Awards Advisory Committee: the chairman is the Dean of the Faculty of Medicine of Queen's University, and the members represent both universities, the DHSS, the four Health and Social Services Boards (purchasers of both health and social care) and the MRC. The scheme's budget for 1993-94 was £490,000; in 1994 10 fellowships and 46 grants were awarded (p224, Q773).

3. The *DHSS Departmental Research Group* supports three units in the Medical Faculty of Queen's University: the Health and Health Care Research Unit (p220, Q643), the Cancer Registry (p221, Q646), and the Drug Utilisation Research Unit. It also funds health services research on the basis of requests from policy divisions of the department, or, more usually, unsolicited proposals. The budget for this activity for 1993-94 was £1,014,000.

4. The *Supplement for Teaching and Research* (STAR) is the Northern Irish equivalent of SIFTR. The STAR budget for 1993-94 was £24.7m, of which one quarter (£6.2m) is notionally attributed to research.

5. *Research studentships* are awarded in dentistry, nursing, hospital pharmacy and the therapies (by the Health and Personal Social Services Management Executive) and in social work (by the Social Services Inspectorate). The budget for 1993-94 was £200,000.

6. The Health and Social Services Boards support research to some extent (p222, Q771), and one of them (Eastern) has produced a research strategy and plan. The National Board for Nursing, Midwifery and Health Visiting has a Research Strategy and a small research budget (£10,000 - Q768), and the DHSS has produced an Action Plan for Nursing R&D in Northern Ireland.

DHSS (NI) R&D 1993-94	
STAR (25 per cent)	£6,200,000
Departmental Research	£1,014,000
Fellowships and grants	£490,000
Studentships	£200,000
Other	£296,000
TOTAL	£8,200,000

7. Local charities put £750,000 into medical research in Northern Ireland in 1991-92. By contrast, little is received from the Research Councils (Q653, p221), though DHSS (NI) is a party to the MRC Concordat. However the DHSS has recently begun to develop some training fellowships and projects jointly with the MRC (Q752), and Queen's University's receipts from the MRC are on the increase (Q655).

8. In April 1993, DHSS (NI) published "A Strategy for R&D in the Health and Personal Social Services in Northern Ireland: Consultative Paper". This document acknowledged the NHS R&D Strategy for England and developments in Wales and Scotland, and proposed broadly similar arrangements for Northern Ireland. It was proposed to appoint a part-time Director of R&D "with a high level of credibility in the research community"; a Departmental R&D Committee; and an R&D Advisory Committee. The Director and the Departmental Committee, advised by the Advisory Committee, would "identify priority areas for a multidisciplinary R&D programme". Three groups within the Departmental Committee were envisaged: Clinical Research, embracing STAR and the Fellowship Scheme; Services Research; and Population Studies. Besides research itself, it was proposed to put more effort into dissemination, and into the development of research expertise. It was acknowledged that, "in order to ensure that R&D activities are fostered and exploited appropriately, it will be necessary to enhance resources available within the Department"; but no target was set (Q767).

9. The consultative paper was generally well received, and has been implemented, except that a Director of R&D has not yet been appointed. The DHSS has yet to decide where to locate this post and how to resource it; but "there is no question but that the Department accepts the need for a Director" (Q738). It is hoped to make the appointment this year, probably as a half-time post. Queen's University is not content with the rate of progress (Q669); neither is the University of Ulster (p477).

10. The DHSS (NI) is in contact with the organs of the NHS R&D Strategy in England to the extent permitted by its limited resources (Q755). In particular it shares in the funding and management of the Cochrane and York Centres. However Northern Ireland maintains its own research priorities (Q762), informed by its own Regional Strategy for HPSS which predates *Health of the Nation* (Q738). Professor Stout of Queen's University considers that Northern Ireland is too small to maintain a comprehensive independent R&D strategy; he suggests that instead the Province should be integrated into the English Strategy on the same basis as an English Region, possibly taking lead responsibility for R&D in community care (Q670).

11. Collaboration in health services research between Northern Ireland and the Republic of Ireland is currently being strengthened (Q755). The Cancer Registry and the Drug Utilisation Research Unit are in close contact with the Republic, and discussions are taking place with a view to setting up an all-Ireland Institute of Public Health, with "a very major research focus".

12. Northern Ireland has a distinctive approach to clinical academic appointments (Q783). All such appointments are of the type known in Great Britain as "A plus B": the appointment is made jointly by the university and the health authority; each pays half the basic salary, and the health authority pays distinction awards. The DHSS contributions are a charge against STAR.

APPENDIX 14
ACOST Report on Medical Research and Health

1. ACOST, the Advisory Council on Science and Technology (now defunct), reported in February 1993 on technology transfer in the area of medical devices, procedures and drugs. The enquiry was chaired by Dr Peter Doyle (then of ICI, now of Zeneca); he met us in February (Q794). Separate task forces covered pharmaceuticals, surgery, medical devices, gene therapy and transplantation, and screening, diagnosis and prevention.

2. The starting points for this report are the rapid advances in medical science, especially in molecular biology, non-invasive diagnostic techniques and minimal-access surgery; the United Kingdom's strength in basic medical research and pharmaceuticals; and the NHS R&D Strategy, with its emphasis on getting high-quality research into cost-effective practice.

3. The report identifies a "development gap", whereby the fruits of research have difficulty reaching the first stages of exploitation. This issue was highlighted by the task force on medical devices; it is a problem common to most areas of R&D in the UK, and one which is considered to be handled better by other countries including the USA and Japan. ACOST recommends:

— "intermediate institutions" linking the university and the industry, along the lines of the Centre for Advanced Instrumentation set up by UCL and the Scientific Instrument Research Association;

— a specifically medical programme within LINK;

— a grace period between publication and filing a patent application, in view of "the pressure on scientists to publish their research quickly";

— identifiable funds for technology transfer within the budget of the teaching hospital, possibly derived from SIFTR.

4. The report also identifies, in all areas apart from pharmaceuticals, a lack of control in bringing new procedures into clinical practice. Adoption of new procedures is haphazard; sometimes uncritical, sometimes slow and reluctant; too rarely based on systematic evaluation of cost-effectiveness. This issue was highlighted by the task force on surgery, in the light of the uncritical adoption of minimal-access techniques, and by the task force on screening, who offered case studies of a range of screening programmes varying widely in proven worth. ACOST recommends:

— control by the NHS of all new medical devices and applications of devices;

— a Health Departments Committee on the Safety and Efficacy of Surgical Procedures;

— a drive, led by RDRDs, to communicate with practitioners to see that validated new techniques are implemented and obsolete ones withdrawn.

5. The report expresses concern about the facilities offered by the UK for clinical trials. "Many health professionals are unwilling to participate in or encourage clinical trials"; and clinicians need training in "Good Clinical Practice" if UK trials are to stand up to international scrutiny.

6. The report also recommends progress towards common methodologies of health economics, to make evaluations more consistent and comparable; and improved dialogue between the NHS as an "intelligent customer" and its industrial suppliers. It does not cover education and training, but notes that "the importance of education and training featured prominently in every discussion".

Government response (June 1993)

7. The Government accepted the principles underlying the ACOST report. They acknowledged the importance of the medical industries; the role of the NHS as "not just a consumer of the products of medical research but...a test bed, collaborator and midwife to the process of medical R&D"; and the need to get research into practice. However their response consists largely of a recital of initiatives already in hand.

8. With regard to the "development gap", they drew attention to the EC Advanced Informatics in Medicine programme, and to medical technology projects already supported by LINK, SMART,

SPUR and EUREKA; however they undertook to "review the scope" for a new medical programme within LINK. They noted that a grace period for patent applications was one possible outcome of an international treaty on intellectual property then under discussion.

9. The response declares, "The Government is working to ensure that new devices or novel applications which raise important questions of safety, effectiveness or cost-effectiveness which are not covered by regulatory mechanisms are appropriately evaluated and do not pass into general use in health care until shown to be safe, effective and cost-effective", and, "The abandonment of obsolete and ineffective techniques is of great importance". It refers to a recent DH report, "Assessing the Effect of Health Technologies"; the NHS R&D Strategy, involving the SGHT and the dissemination of information about effectiveness; the role of RDRDs to encourage evidence-based practice and purchasing; the DH medical devices evaluation programme and the National Reporting and Investigation Centre which tracks adverse incidents in service; EC Directives on medical devices; a DH-Scottish Office joint advisory report on minimal-access surgery; and the significant DH-NHS investment in "research and audit studies on outcomes of medical interventions". However the Government rejected the proposal for a committee on the safety of surgical procedures. They warned, "bearing in mind the vast array of new technologies being presented to the NHS, it will be important to prioritise health technology assessment so that resources are used to the best effect...[and] innovation is not stifled"; and, "the pace and scale of technological change will make the task of monitoring the application of new technologies especially difficult".

10. The one recommendation explicitly endorsed is that for training in Good Clinical Practice for those involved in clinical research. The response "recommends" that the NHS co-ordinate it, in consultation with professional and regulatory bodies, and that RDRDs take the lead.

11. With regard to common standards in health economics, the response refers to the York Centre for Health Economics, the Scottish Health Economics Research Unit, and the SGHT's Methodology Advisory Panel. As for the NHS as an intelligent customer, in England "Links are being established between the NHS Supplies Authority and the NHS R&D programme", and in Scotland evaluation mechanisms have been located within the Supplies Division of the NHS common services agency. The response refers also to the NHS R&D advisory group on genetics, and the MRC's new Health Services and Public Health Research Board and Genetic Approach to Human Health initiative.

Subsequent developments

12. In the long run, ACOST may get more of what they wanted than appears from the Government response. On 30 January 1995 (DH Press Release 95/45), the Government announced MEDLINK, which will offer £20m over five years for matched funding of academic-industry collaborations in the field of medical devices. The Department of Health has begun discussions with the Conference of Colleges about the development of a system for identifying major new technologies in the NHS and ensuring that appropriate evaluation takes place before procedures enter general use; and training in Good Clinical Practice will form part of the research capacity strategy for NHS R&D now being prepared (p370).

APPENDIX 15
Acronyms

ABHI	Association of British HealthCare Industries
ABPI	Association of the British Pharmaceutical Industry
ACDA	Advisory Committee on Distinction Awards
ACOST	Advisory Council on Science and Technology
ACT	Additional Cost of Teaching
AGMETS	Advisory Group on Medical and Dental Education, Training and Staffing
AGRA	Advisory Group on Resource Allocation
AMRC	Association of Medical Research Charities
ARC	Arthritis and Rheumatism Council
AUDGP	Association of University Departments of General Practice
AYMS	Association of Young Medical Scientists
BBSRC	Biotechnology and Biological Sciences Research Council
BDA	British Dental Association
BMA	British Medical Association
BMJ	British Medical Journal
BPMF	British Postgraduate Medical Federation
CCST	Certificate of Completion of Specialist Training
CDMS	Council of Deans of Medical Schools
CMO	Chief Medical Officer
CMRC	Conference of Medical Royal Colleges and their Faculties in the UK
COSHEP	Committee of Scottish Higher Education Principals
CRC	Clinical Research Centre
CRDC	Central Research and Development Committee
CSO	Chief Scientist Organisation
CSTI	Council of Science and Technology Institutes
CVCP	Committee of Vice-Chancellors and Principals of the Universities of the UK
DDRB	Review Body on Doctors' and Dentists' Remuneration
DH	Department of Health
DHA	District Health Authority
DHSS	Department of Health and Social Services
DoE	Department of the Environment
DTI	Department of Trade and Industry
DFE	Department for Education
DRD	Director of Research and Development
ECR	Extra-contractual referral
EPSRC	Engineering and Physical Sciences Research Council
ESRC	Economic and Social Research Council
EU	European Union
FHSA	Family Health Services Authority
GDC	General Dental Council
GMC	General Medical Council
GP	General Practitioner
GRiPP	Getting Research into Practice and Purchasing
HEFC	Higher Education Funding Council
HEFCE	Higher Education Funding Council for England
HPSS	Health and Personal Social Services
HSE	Health and Safety Executive
HSR	Health services research
ICRF	Imperial Cancer Research Fund
IPSM	Institute of Physical Sciences in Medicine
IPR	Intellectual property rights
LORS	Locally Organised Research Schemes
JMAC	Joint Medical Advisory Committee
JPAC	Joint Planning Advisory Committee
MAFF	Ministry of Agriculture, Fisheries and Food
MRC	Medical Research Council
NAHAT	National Association of Health Authorities and Trusts
NHS	National Health Service
NHS(M)E	NHS (Management) Executive
NTN	National Training Number

OST	Office of Science and Technology
PCFC	Polytechnics and Colleges Funding Council
POST	Parliamentary Office of Science and Technology
R&D	Research and Development
RAE	Research Assessment Exercise
RAEng	Royal Academy of Engineering
RAWP	Resource Allocation Working Party
RCGP	Royal College of General Practitioners
RCN	Royal College of Nursing
RDD	Research and Development Directorate
RDRD	Regional Director of Research and Development
RHA	Regional Health Authority
RoR	Review of the RAWP Formula
RPMS	Royal Postgraduate Medical School
RSE	Royal Society of Edinburgh
SCOPME	Standing Committee on Postgraduate Medical and Dental Education
SGHT	Standing Group on Health Technology
SGUMDER	Steering Group on Undergraduate Medical and Dental Education and Research
SHA	Special Health Authority
SHERT	Scottish Hospital Endowments Research Trust
SHHD	Scottish Office Home and Health Department
SIFT(R)	Service Increment for Teaching (and Research)
STAR	Supplement for Teaching and Research
UCL	University College London
UGC	University Grants Committee
UFC	Universities Funding Council
UMDS	United Medical and Dental Schools of Guy's and St Thomas' Hospitals
UKCCCR	UK Co-ordinating Committee on Cancer Research

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